

County
Borough of West Hartlepool.



HEALTH REPORT

FOR THE YEAR 1902.

BY

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MEDICAL OFFICER OF HEALTH.

WEST HARTLEPOOL:

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1903.

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HEALTH COMMITTEE.

ALDERMAN CLARKSON (*Chairman*).

„ GRAINGER.

„ FURNESS.

„ RICKINSON.

„ WILSON.

COUNCILLOR COATES.

„ FRYER.

„ HARRISON.

„ JOHNSON.

„ SHORT.

„ SOMERVILLE-WOODIWIS.

His Worship the Mayor is Ex-Officio a member of all Committees.

FRED H. MORISON, M.D. Edin., D.P.H.R.C.S.I.

Medical Officer of Health.



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MEDICAL OFFICER'S REPORT.

FOR THE YEAR ENDED DECEMBER 31ST, 1902.

To the Chairman and Members of the Health Committee.

SIR AND GENTLEMEN,

I have pleasure in presenting to you my Fourth Annual Report, viz., that for the year 1902.

I think you will find our Vital Statistics compare favourably with those for the County and also with other large towns.

The work done and to be done in the Health Department has naturally increased enormously with the increase in size and population of the Borough.

At present the staff is not large enough for the amount of work, if it is to be done efficiently, and I would again strongly advocate the appointment of a Lady Health Visitor, or Female Sanitary Inspector, as some prefer to call them.

Several important changes have taken place in the working of this department. Your Medical Officer has, for the first time, an office in the Municipal Buildings, and is in attendance every morning between 9 and 10.

This is a great convenience, and much facilitates the work of the department.

The Health Department is now kept open all day (from 9 a.m. to 5 p.m.) for the convenience of the public, and not merely for two hours per day as previously. The accommodation has also been increased by taking in an extra room, and building a store for disinfectants, &c., outside.

Midden privies still continue to be a source of danger and ill-health : as many as possible have been done away with during the year, but unfortunately many more remain. The Borough will never be in a satisfactory sanitary condition until they are all abolished.

The new sewerage scheme has progressed most satisfactorily. In addition to the new outlet and the Burn Road sewer, which were completed last year, the Whitby Street section is now completed, and the York Road section nearly so : progress in the latter section has, however, been somewhat retarded on account of rock having to be cut through. A start has also been made with the Bridge Street outlet, and the Seaton section will be commenced shortly. A large number of the subsidiary sewers will, however, have to be replaced before the system can be in an entirely satisfactory condition.

The Health Committee is to be congratulated on their recommendation, which was accepted by the Council, to build a new Infectious Disease Hospital, the need for which has been demonstrated in a very emphatic manner during the year, by the number of infectious diseases notified.

The death tables which will be found at the end of the report are most instructive, and I think will be found valuable. Many striking facts are to be gleaned from them.

Table iv. is a classification of deaths occurring within the Borough, whilst table v. is a complete classification of the deaths of all inhabitants, whether occurring within the Borough or not.

GEOLOGY.

The soil on which our dwellings are built is a matter of great importance, and much that has been attributed to climate is really due to locality.

Soils are generally divided into moist and dry, permeable and impermeable, and again sub-divided according to formation, composition, slope, &c.

Healthy soils are those which are dry and permeable, or which have such a slope as to render drainage easy; on the other hand soils which are flat, moist and impermeable are generally unhealthy.

The air in soils is generally more or less impure, hence the inadvisability of occupying dwellings below the ground level, or situated immediately on its surface.

The water in the soil is also a question of great importance, apart from the mere moisture.

Healthy soils are the granites, metamorphic rocks, clay, slate, limestone, sandstone, chalk, gravel and sand. Unhealthy are clay, sand and gravel with clay subsoil, alluvial soil, and marsh lands, with the exception of peat lands.

Among the unhealthy soils ought also to be included all "made" soils, particularly those that are formed so often in towns from rubbish of all sorts.

Such soils ought not to be occupied as building sites for at least two years.

West Hartlepool is largely built on boulder clay, which overlies magnesian limestone.

This magnesian limestone extends a great distance both west and north, and terminates in a downward fault, shewing new red sandstone to the southward.

The line of division between the magnesian limestone and the new red sandstone is a straight one, ranging from a point on the coast, about half-a-mile north of the Long Scar, through Rift House and Brearton.

All north and north-west of this line, as before mentioned, is boulder clay upon magnesian limestone.

South and south-east of this line, the limits of the Borough, are boulder clay overlying new red sandstone.

This boulder clay varies in depth very considerably. In some few instances it is not more than a few feet in depth, there being, as is well known, an outcrop of limestone near the water works, and it is exposed on the cliffs at Hartlepool.

There is also an outcrop, and the stone is quarried, a little west of the Park; whilst there are further outcrops near Hart and Hesleden. These outcrops point to natural anti-clines, and this would seem to indicate that between these outcrops there is a large area forming, as it were, a basin or hollow, and the town is largely built upon the clay which has been deposited in this basin.

On the new red sandstone the depth of the clay also varies in a large degree.

In some recent excavations it was found that there was not more than some five or six feet in depth of this boulder clay, beneath which was clean sand, and this again was overlying red marl, while in other cases the layer of boulder clay has been found to be of very great thickness.

In certain places outcrops of sand and limestone gravel have been found, as in Park Road, near the Presbyterian Church; also on the rising ground near the west end of Park Road, as well as in Grange Road, east of Wooler Road, and it is thought that a narrow belt of this sand and gravel extends from Low Throston nearly to Greatham. This belt is known to widen out westwardly, at the centre to include Dalton Piercy and part of Elwick.

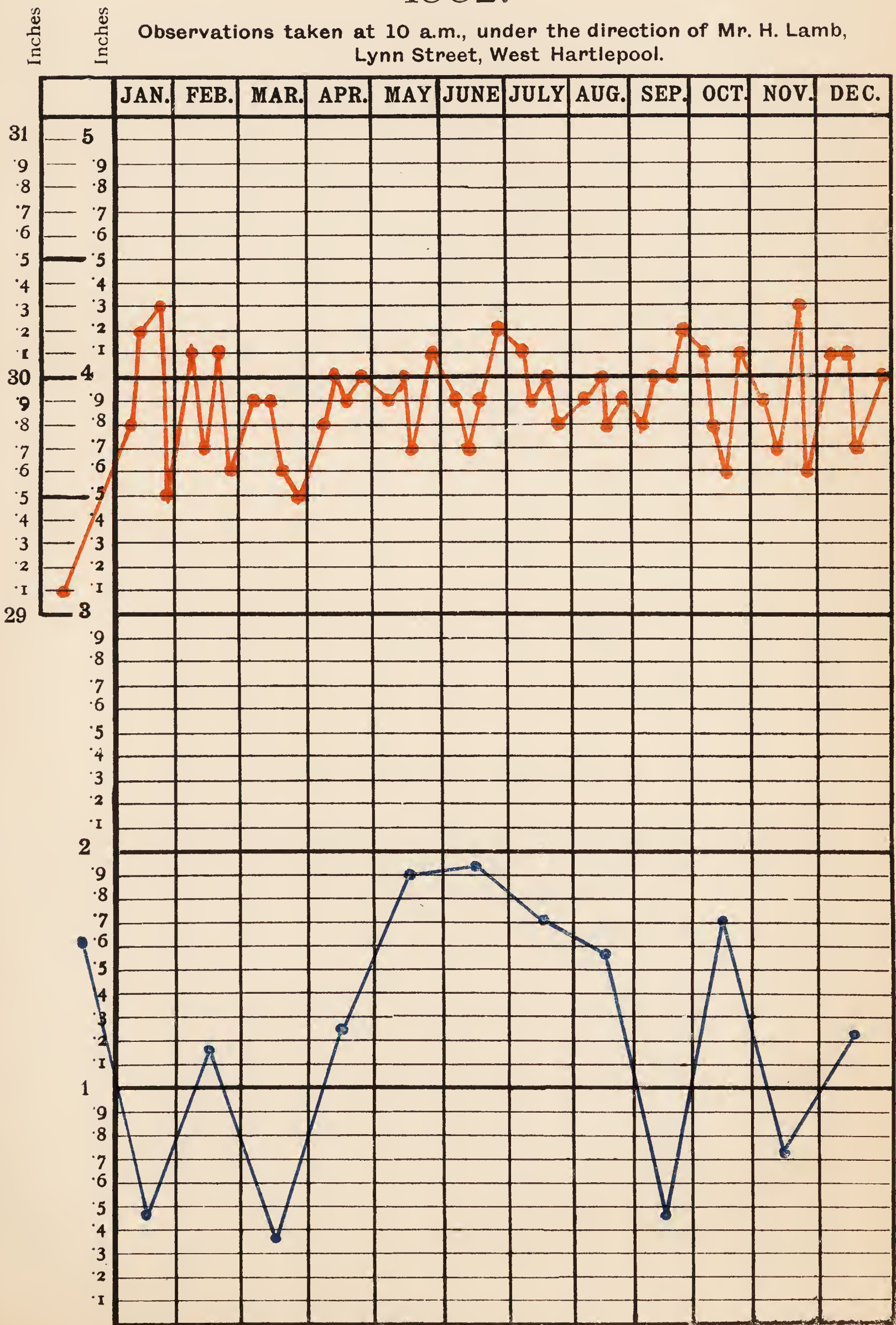
The foundation of Seaton Carew is similar to that of West Hartlepool, in so far as it lies on boulder clay, but, unlike West Hartlepool, this boulder clay overlies new red sandstone.

To the east of Whitby Street, for a large area, the ground was levelled up with "ships' ballast," composed of sand, marl and gravel.

This "made" ground varies in depth from a foot or two to six or seven feet.

PLATE I.
METEOROLOGICAL CHART
(BAROMETER AND RAINFALL),
1902.

Observations taken at 10 a.m., under the direction of Mr. H. Lamb,
Lynn Street, West Hartlepool.



BAROMETER.

RAINFALL.

RAINFALL IN 1902.

Rain Gauge.

Diameter of Funnel ... 5 in.
 Height of top from ground ... 63 ft.
 Height of top above sea level... 84 ft.

MONTH			TOTAL DEPTH	GREATEST FALL IN 24 HOURS		No. OF DAYS ON WHICH '01 OR MORE FELL
			Inches	Depth	Date	
January	..	..	'490	'12	20th	7
February	..	..	1'175	'37	24th	13
March	..	..	'370	'08	24th	9
April	..	..	1'250	'66	15th	9
May..	..	..	1'900	'55	30th	19
June	..	..	1'945	'40	12th	15
July	..	..	1'705	'41	1st	17
August	..	..	1'560	'39	17th	15
September	..	..	'485	'14	15th	10
October	..	..	1'700	'44	9th	21
November	..	..	'785	'42	24th	8
December	..	..	1'225	'26	1st	12
Total	..	..	14'590			155

The following table shews the rainfall for the last 10 years, and it will be noticed that, with the exception of 1898, which is practically the same, it is considerably the lowest recorded during that time.

Year.	Rainfall in inches.				
1893	15'15
1894	18'83
1895	22'43
1896	17'62
1897	16'41
1898	14'56
1899	18'02
1900	23'91
1901	18'76
1902	14'59

On looking back it is rather surprising to find such a small total rainfall, as the year appeared to be an exceptionally wet one, but the record shews a series of wet days without any heavy falls: weather such as this must have a serious effect on the health, more especially of children and old people.

POPULATION.

Owing to the depression in trade, and in consequence of some families having left the town to seek work, many houses are unoccupied, and, I think, we may safely conclude that the population has not increased much during the year.

We may, therefore, call it the same as at the census, viz. :—62,627.

In the preliminary return of the census, which I received, the population was mentioned as being 62,614, and on this figure are all the statistics of the year based. The error is small, but as mentioned above the true population at the census was 62,627, made up as follows :—

Males	...	...	31,845
Females	...	...	30,782

Table shewing ages of persons, male and female, in the Borough at the census :—

			Males		Females.
Under 1 year	1,956	...	1,004	...	952
1 „	1,726	...	838	...	888
2 years	1,623	...	817	...	806
3 „	1,610	...	794	...	816
4 „	1,550	...	747	...	803
Under 5 years	8,465	...	4,200	...	4,265
5 years	7,401	...	3,689	...	3,712
10 „	4,136	...	2,111	...	2,025
13 „	1,249	...	618	...	631
14 „	1,284	...	629	...	655
15 „	1,267	...	641	...	626
16 „	1,327	...	678	...	649
17 „	1,310	...	633	...	677
18 „	1,294	...	674	...	620
19 „	1,242	...	622	...	620
20 „	1,337	...	677	...	660

				Males.		Females.
21	„	5,232	...	2,668	...	2,564
25	„	6,007	...	3,056	..	2,951
30	„	4,734	...	2,471	...	2,263
35	„	3,983	...	2,045	...	1,938
40	„	3,220	...	1,734	...	1,486
45	„	2,700	...	1,452	...	1,248
50	„	2,199	...	1,202	...	997
55	„	1,508	...	761	..	747
60	„	1,154	...	588	...	566
65	„	755	...	351	...	404
70	„	454	...	192	...	262
75	„	257	...	105	...	152
80	„	84	...	38	...	46
85	„	19	...	6	...	13
90	„	8	...	4	...	4
95	„	1	...	0	...	1
100	„	0	...	0	...	0
			<u>62,627</u>	<u>31,845</u>		<u>30,782</u>

Condition as to Marriage, and ages of persons (male and female) at the census.

	All Ages	Under 15	15	16	17	18	19	20	21	25	35	45	55	65	75	85 up.
Unmarried	M. 20,134	11247	641	678	633	673	609	652	2064	1933	587	275	103	35	3	1
	F. 18,057	11288	626	649	673	601	567	543	1467	1156	293	112	47	25	8	2
	P. 38,191	22535	1267	1327	1306	1274	1176	1195	3531	3089	880	387	150	60	11	3
Married	M. 10,833	..	..	..	..	1	13	25	598	3538	3054	2164	1040	343	55	2
	F. 10,990	..	..	..	4	19	53	116	1086	3955	2910	1763	799	250	35	..
	P. 21,823	..	..	..	4	20	66	141	1684	7493	5964	3927	1837	593	90	2
Widowed	M. 878	..	..	..	..	..	..	..	6	56	138	215	206	165	85	7
	F. 1,735	..	..	..	..	..	..	1	11	103	221	370	467	391	155	16
	P. 2,613	..	..	..	..	..	..	1	17	159	359	585	673	556	240	23

Condensed table shewing occupations of MALES aged 10 years and upwards, also proportion of children of 10 and under 14 years of age engaged in occupations.

Males aged 10 and under 14 engaged in occupations ... 56
 Proportion per cent. engaged in occupations to total ... 2·1

Retired or unoccupied	...	...	3,617
Engaged in occupations	...	...	20,339
<hr/>			
Total occupied and unoccupied	...	...	23,956
<hr/>			
Commercial or business clerks	...	...	684
Conveyance of men, goods and messages	...	...	3,212
Coal and shale miners	...	...	7
Iron and steel manufacture	...	...	854
Engineering and machine making	...	...	2,267
Tools, dies, &c., arms, miscellaneous metal trades	...	...	405
Ships and boats	...	...	3,985
Building and works of construction	...	...	2,475
Wood, furniture, fittings and decorations	...	...	859
Brick, cement, pottery and glass	...	...	167
Chemicals, oils, grease, &c., skins, leather, hair and feathers	...	...	83
Paper, prints, books and stationery	...	...	215
Dress	...	...	435
Food, tobacco, drink and lodgings	...	...	1,166
All other occupations	...	...	3,525
<hr/>			
			20,339
<hr/>			

A similar table shewing occupations of FEMALES aged 10 years and upwards, also proportion of children of 10 and under 14 years of age, and of married or widowed women engaged in occupations, and proportion of female domestic servants to separate occupiers or families.

Females aged 10 and under 14 engaged in occupations	...	...	16
Proportion per cent. engaged in occupations to total	...	...	0·6
Retired or unoccupied	...	...	18,436
Engaged in	} Occupations	Unmarried	...
		Married or widowed	...
			701
<hr/>			
Total occupied and unoccupied	...	...	22,805
<hr/>			

Domestic indoor servants (not in hotels, &c.)	...	1,766
Charwomen	... ..	81
Laundry and washing service	... ..	174
Paper, prints, books and stationery	... ..	99
Textile manufactures	... ..	14
Tailoresses, milliners, dressmakers, shirtmakers and Seamstresses	... ..	666
Food, tobacco, drink and lodging	... ..	560
All other occupations	... ..	712
		<hr/>
		4,072
		<hr/>

Proportion per cent. of married or widowed engaged
in occupations 5'5

Proportion per cent. of domestic servants to total
number of separate occupiers or families ... 14'2

The number of inhabitants in each ward is as follows :—

	Males.		Females.		Total.
North	... 4,161	...	3,970	...	8,131
West	... 5,306	...	5,385	...	10,691
Park	... 3,887	...	4,528	...	8,415
South-west	... 5,694	...	5,546	...	11,240
South-east	... 4,257	...	3,819	...	8,076
Central	... 4,945	...	4,582	...	9,527
North-east	... 2,590	...	1,891	...	4,481
Seaton	... 1,005	...	1,061	...	2,066
	<hr/>		<hr/>		<hr/>
	31,845		30,782		62,627
	<hr/>		<hr/>		<hr/>

MARRIAGES.

During the year 487 marriages have been registered—in the Church of England 277; in Nonconformist Churches 107; in the Registry Office 103.

In the previous year 573 marriages were registered: thus there is a decrease of 86, an indication, I take it, of the depression in trade from which we are suffering.

VITAL STATISTICS—BIRTHS.

During the year 2,357 births were registered, as against 2,261 in 1901, being an increase of 96.

This gives us a birth-rate of 37·6 per 1,000 per annum, the highest recorded for many years; a highly satisfactory condition of affairs, considering the marked lowering of the birth-rate throughout the country.

The birth-rates for the last 10 years will be found in Table I. at the end of the Report.

Of the 2,357 births there were:—

Males	...	...	1,253
Females	...	...	1,104

Of these 79 were illegitimate, or an average of 33·5 per 1000 births registered.

The accompanying table shews the number of births in each Ward each week in the year, with the birth-rate for each week, together with the birth-rate for the year in each Ward.

The following table shews the natural increase or decrease in population, that is the increase or decrease in the number of births over deaths during the year in the several Wards of the Borough:—

			Births.		Deaths.		Increase or Decrease.
North	...	...	346	...	110	...	+ 236
West	...	...	431	...	132	...	+ 299
Park	...	...	255	..	84	...	+ 171
South-West	...	...	477	...	188	...	+ 289
South-East	...	...	329	...	130	...	+ 199
Seaton	...	...	70	...	42	...	+ 28
North-East	...	...	104	...	53	...	+ 51
Central	...	...	345	...	154	...	+ 191
			<hr/>		<hr/>		<hr/>
			2,357		893		+ 1,464
			<hr/>		<hr/>		<hr/>

BIRTHS, WITH RATES, IN THE VARIOUS WARDS EACH WEEK.

WEEK ENDING	Wards {	North	West	Park	South-West	South-East	Seaton	North-East	Central	TOTAL	Birth-rate per 1,000 per annum
January	4th	3	8	—	9	1	—	2	5	28	40·6
	11th	6	13	6	11	6	1	2	8	53	44
	18th	3	8	5	14	5	2	3	5	45	37·3
	25th	5	11	3	9	15	—	2	6	51	42·3
February	1st	3	9	1	6	2	1	5	6	33	27·4
	8th	12	3	6	8	5	1	1	6	42	34·8
	15th	3	8	3	11	6	1	4	4	40	33·2
	22nd	9	4	3	11	6	—	2	6	41	34
March	1st	6	9	5	17	12	1	1	11	62	51·4
	8th	7	9	5	9	5	—	3	2	40	33·2
	15th	5	6	7	9	7	3	1	6	44	36·5
	22nd	3	7	12	6	4	3	4	7	46	38·2
	29th	10	13	4	7	10	2	2	6	54	44·8
April	5th	3	11	9	7	5	1	1	4	41	34
	12th	8	9	7	13	11	1	—	7	56	46·5
	19th	5	11	9	14	6	1	1	13	60	49·8
	26th	7	5	7	9	1	1	4	7	41	34
May	3rd	6	13	6	11	5	—	5	11	57	47·3
	10th	5	11	5	7	7	2	—	6	43	35·7
	17th	8	14	8	12	6	4	2	8	62	51·4
	24th	9	4	4	12	1	2	3	5	40	33·2
	31st	11	9	4	10	6	1	3	7	51	42·3
June	7th	6	10	5	10	6	1	1	7	46	38·2
	14th	7	11	4	4	7	1	2	8	44	36·5
	21st	7	7	9	8	10	1	—	10	52	43·1
	28th	6	12	6	8	4	2	1	10	49	40·6
July	5th	8	5	5	9	6	3	1	7	44	36·5
	12th	5	10	8	8	4	3	2	4	44	36·5
	19th	7	7	5	11	5	1	2	5	43	35·7
	26th	8	7	3	7	6	1	1	6	39	32·3
August	2nd	13	7	5	7	4	—	2	15	53	44
	9th	7	6	3	8	11	1	1	5	42	34·8
	16th	7	8	4	12	4	1	—	7	43	35·7
	23rd	8	9	5	3	9	3	2	3	42	34·8
	30th	8	11	3	9	8	1	1	4	45	37·3
September	6th	8	4	5	9	4	3	1	6	40	33·2
	13th	2	9	6	11	9	2	1	8	48	39·8
	20th	13	7	1	11	5	—	2	4	43	35·7
	27th	9	9	2	8	9	—	7	5	49	40·6
October	4th	—	10	7	10	6	—	1	5	39	32·3
	11th	4	7	3	11	4	1	3	1	34	28·2
	18th	12	3	4	15	8	1	4	7	54	44·8
	25th	5	5	6	4	9	2	3	9	43	35·7
November	1st	7	10	—	4	10	1	2	10	44	36·5
	8th	4	4	5	5	4	3	1	4	30	24·9
	15th	8	11	8	11	4	4	2	11	59	48·9
	22nd	5	14	4	10	5	—	1	3	42	34·8
	29th	5	6	5	3	6	2	3	8	38	31·5
December	6th	2	6	6	10	8	—	—	7	39	32·3
	13th	6	6	2	6	2	2	1	8	33	27·3
	20th	6	6	2	8	4	1	2	4	33	27·3
	27th	10	4	5	10	4	1	1	4	39	32·3
	29th to 31st	6	5	—	5	12	—	2	4	34	42·3
Total	..	346	431	255	477	329	70	104	345	2357	37·6
Birth Rate	..	42·5	40·3	30·3	42·4	40·7	33·8	25·8	36·2		

DEATHS.

During the year 893 deaths have been registered as occurring within the Borough. From this must be deducted 8 for persons dying within but not belonging to the Borough, and addition must be made of—

16	occurring in the Hartlepoons Hospital,
3	„ Port Sanitary Hospital, Throston,
72	„ Workhouse, Throston,
1	„ H.M. Prison, Durham,
5	„ County Asylum, Sedgefield.
1	„ Hospital, Greatham,

a total of 98 persons belonging to the Borough who have died elsewhere, giving a total of 983 deaths of persons belonging to the Borough, viz.:—
500 males and 483 females.

The death-rate for the year is thus 15·7. The death-rate for the past 10 years will be found in Table I. at the end of the report. The accompanying Table shews the number of deaths each week in the various wards, with the death-rate each week, and the total deaths with the death-rate in each ward for the year.

The most instructive as well as the most important statistics are those dealing with mortality and its causes, these are presented in the following pages.

The total death-rate for the Borough during the year was 15·7 and the average rate for the past 10 years was 15·9.

Quite apart from conditions of sanitation mortality varies widely at different age periods, as the table below shews; consequently the death-rate of the community is largely influenced by the proportions living at each age period; the effect of a high birth-rate in raising the crude death-rate is well seen by the table, which also indicates plainly enough how the crude returns are modified if there happens to be an unusual proportion at any one age period.

It is plain, therefore, that any variation in the proportions living at the respective age periods would affect the death-rate, and this with absolutely no change whatever in municipal sanitation.

DEATHS, WITH RATES, IN THE VARIOUS WARDS EACH WEEK.

WEEK ENDING	Wards {	North	West	Park	South-West	South-East	Central	North-East	Seaton	TOTAL	Death-rate per 1,000 per annum
Jan. 1st to 4th		—	—	—	—	1	1	1	—	3	—
11th		3	3	—	2	2	7	—	1	18	14·9
18th		1	3	3	6	4	5	1	—	23	19·1
25th		3	3	1	3	4	2	1	1	18	14·9
February 1st		1	2	1	5	5	5	—	—	19	15·7
8th		—	—	5	1	—	3	2	—	11	9·1
15th		2	3	3	6	4	4	1	—	23	19·1
22nd		4	7	2	8	1	3	1	1	27	22·4
March 1st		8	1	3	3	3	2	—	—	20	16·6
8th		5	—	1	3	2	1	3	1	16	13·2
15th		1	2	—	5	3	3	1	1	16	13·2
22nd		1	1	—	5	2	3	—	—	12	9·9
29th		3	5	—	1	3	1	1	—	14	11·6
April 5th		1	3	1	—	2	2	1	1	11	9·1
12th		1	5	3	3	2	3	—	—	17	14·2
19th		4	3	4	4	5	3	4	—	27	22·4
26th		—	5	—	6	4	5	1	—	21	17·4
May 3rd		—	2	—	2	1	2	1	1	9	7·4
10th		—	6	2	3	2	7	3	2	25	20·7
17th		—	2	—	6	4	3	1	—	16	13·2
24th		1	1	1	5	5	4	—	2	19	15·7
31st		4	3	2	3	1	—	—	3	16	13·2
June 7th		1	1	2	3	1	3	—	—	11	9·1
14th		4	3	1	—	3	2	1	2	16	13·2
21st		—	4	2	1	4	4	3	—	18	14·9
28th		1	2	2	3	3	4	2	2	19	15·7
July 5th		1	3	1	3	2	4	3	2	19	15·7
12th		—	1	1	3	2	5	—	—	12	9·9
19th		2	2	4	2	5	3	—	1	19	15·7
26th		2	1	—	1	1	3	1	2	11	9·1
August 2nd		—	2	1	5	1	5	—	—	14	11·6
9th		3	3	2	3	2	3	—	1	17	14·2
16th		2	4	1	3	—	2	—	1	13	10·7
23rd		2	1	2	4	2	2	1	—	14	11·6
30th		1	1	1	3	3	1	—	—	10	8·3
September 6th		2	1	1	3	1	3	—	1	12	9·9
13th		2	—	2	4	5	3	3	1	20	16·6
20th		1	2	2	1	1	—	—	1	8	6·6
27th		2	—	1	4	1	3	1	—	12	9·9
October 4th		2	—	1	3	1	3	—	1	11	9·1
11th		3	3	1	5	2	2	—	—	16	13·2
18th		3	4	2	4	5	4	2	—	24	19·9
25th		2	3	2	4	—	4	1	—	16	13·2
November 1st		3	3	—	12	1	3	—	2	24	19·9
8th		4	2	3	5	5	2	—	1	22	18·2
15th		7	6	2	4	2	2	—	1	24	19·9
22nd		1	1	—	5	4	3	3	—	17	14·2
29th		1	4	4	3	4	3	1	2	22	18·2
December 6th		6	3	4	3	3	2	1	2	24	19·9
13th		2	5	3	2	2	1	1	1	17	14·2
20th		2	1	1	5	2	2	2	1	16	13·2
27th		2	4	3	5	2	2	2	3	23	19·1
28th to 31st		3	2	—	2	—	2	2	—	11	—
Total ..		110	132	84	188	130	154	53	42	893	14·2
Death Rate ..		13·5	12·3	9·9	16·6	16	16·1	11·8	20·3		

The following table shews the annual rate of mortality per 1,000 living at each of 12 age periods during last year, as well as the total number of deaths.

1902	Under 1 year	1 — 2	2 — 5	5 — 10	10 — 20	20 — 30	30 — 40	40 — 50	50 — 60	60 — 70	70 — 80	80 — up	Total at all ages
Rate of m'rtality per 1,000 living at ages indicated	145	46	18	5	3	4	7	11	19	46	104	241	15
Total No. of deaths at each age period	283	81	89	39	40	55	65	68	71	91	74	27	983
Total persons living at each age period.	1956	1726	4783	7401	13109	12576	8717	5920	3707	1909	711	112	62627

INFANT MORTALITY.

The high mortality amongst infants, however good their surroundings, and however carefully maternal care is exercised, arises from many causes : a certain proportion are premature and cannot all survive, some are born with malformations and other defects which soon terminate their existence ; others the offspring of weakly parents cannot long survive, and, in spite of all care, there is a large proportion who will succumb to one or another of the many ailments to which infancy is susceptible.

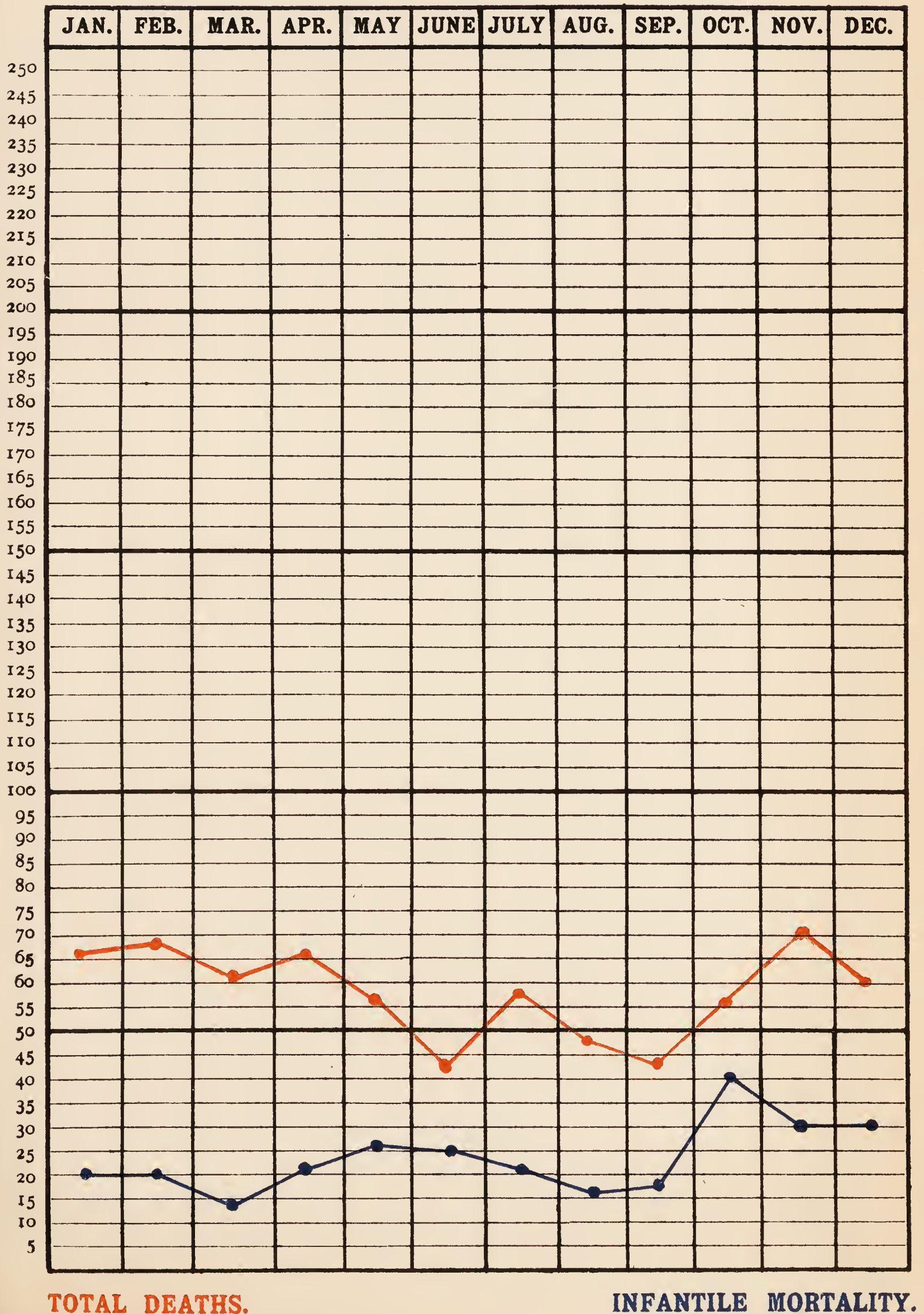
Making due allowance for these, it may be taken that an annual death-rate amongst infants, of 100 per 1,000, is unavoidable, and if this be granted it follows that anything above this is preventible, although the necessary means to prevent it are so extremely difficult to apply that even in the best districts the loss of infant life is in excess of the standard. In the poorer districts it is plain to the most casual observer that necessary care and attention are not given to infants ; nothing is more common than to see the infant handed over to the custody of children or irresponsible persons, whilst the responsible guardians are either at work or engaged in some other way. The children of the very poor are in this way exposed to neglect and inattention which is practicable unavoidable, and which, together with improper food and scanty clothing, is reflected in the sacrifice of life.

As regards the nature of the illness to which death is ascribed, it must not be forgotten that the obscurity of symptoms in infants and young children often leaves a doubt as to which of two or more causes was the primary one.

PLATE III.

CHART SHEWING TOTAL DEATHS EACH MONTH CONTRASTED
WITH INFANTILE MORTALITY.

1902.



TOTAL DEATHS.

INFANTILE MORTALITY.

However, during the year 1902 the total number of deaths of infants under one year of age was 283. Of these zymotic or infectious diseases caused 29. Tuberculosis in one form or another caused 47. Premature birth is responsible for 29. Debility at birth, which probably in most cases means prematurity, for 28, and atrophy 29.

General experience justifies the assumption that the atrophy owed its origin, in a large proportion of cases, to want of proper feeding, and the same remark applies equally to convulsions, which caused 18 deaths. Diseases of the respiratory organs caused 54 deaths.

With necessary care and attention I have no hesitation in saying that a large proportion of these deaths could annually be prevented.

Intemperance in parents is a great cause of infant mortality. Upon this question it hardly needs to be pointed out that if the rearing of young infants requires care, and extreme care, the prospects of life of the infants are poor if the drunkenness of the mother results in its starvation and neglect during the bouts of drunkenness, and they are still poorer when, in addition, injury results from exposure, or from tumbles in the house or street when the woman, with the child in her arms, is too drunk to stagger along without falling, the extreme suffering inflicted on the young by drunkenness and the loss of life resulting from it are the saddest features of town life, and are beyond the powers of sanitation to ameliorate.

With regard to the deaths ascribed to zymotic diseases, the figures do not indicate the full extent of the mischief done by these forms of sickness, owing to the fact that death is very frequently the result, not of the disease itself, but of complications or sequæ consequent upon these diseases: *e.g.*, influenza, measles, or whooping cough has been the predisposing cause of many deaths primarily ascribed to respiratory diseases.

During the year there were 283 deaths of infants under one year of age, or very nearly one-third of the total. This gives an infant mortality of 120 per 1,000 births registered, the previous year it was 142.

This is a matter of congratulation, because it is the lowest infant mortality that has been recorded for the past 12 years (I have no statistics further back), in spite of the fact that this year we also have the highest birth-rate recorded during the same period.

One of the main causes of this satisfactory state of things, I have no doubt, is that we had practically no hot weather during the summer and in consequence no diarrhœa.

The appointment of Female Sanitary Inspectors is a remedy for much of the infant mortality, and more of the unnecessary suffering inflicted on infants through carelessness and ignorance.

The subject has been under the consideration of your Committee, but it appeared to be thought that there was nothing done by women that could not equally be done by men as Sanitary Inspectors. The error of this I hope to be able to point out.

In a great many towns Female Sanitary Inspectors or Lady Health Visitors are, and have been employed for some time, so that it is long passed the experimental stage, and wherever they have been employed they have been an unqualified success, and the benefit to the poor people and especially to children cannot be overestimated.

Shortly their chief duties are :—

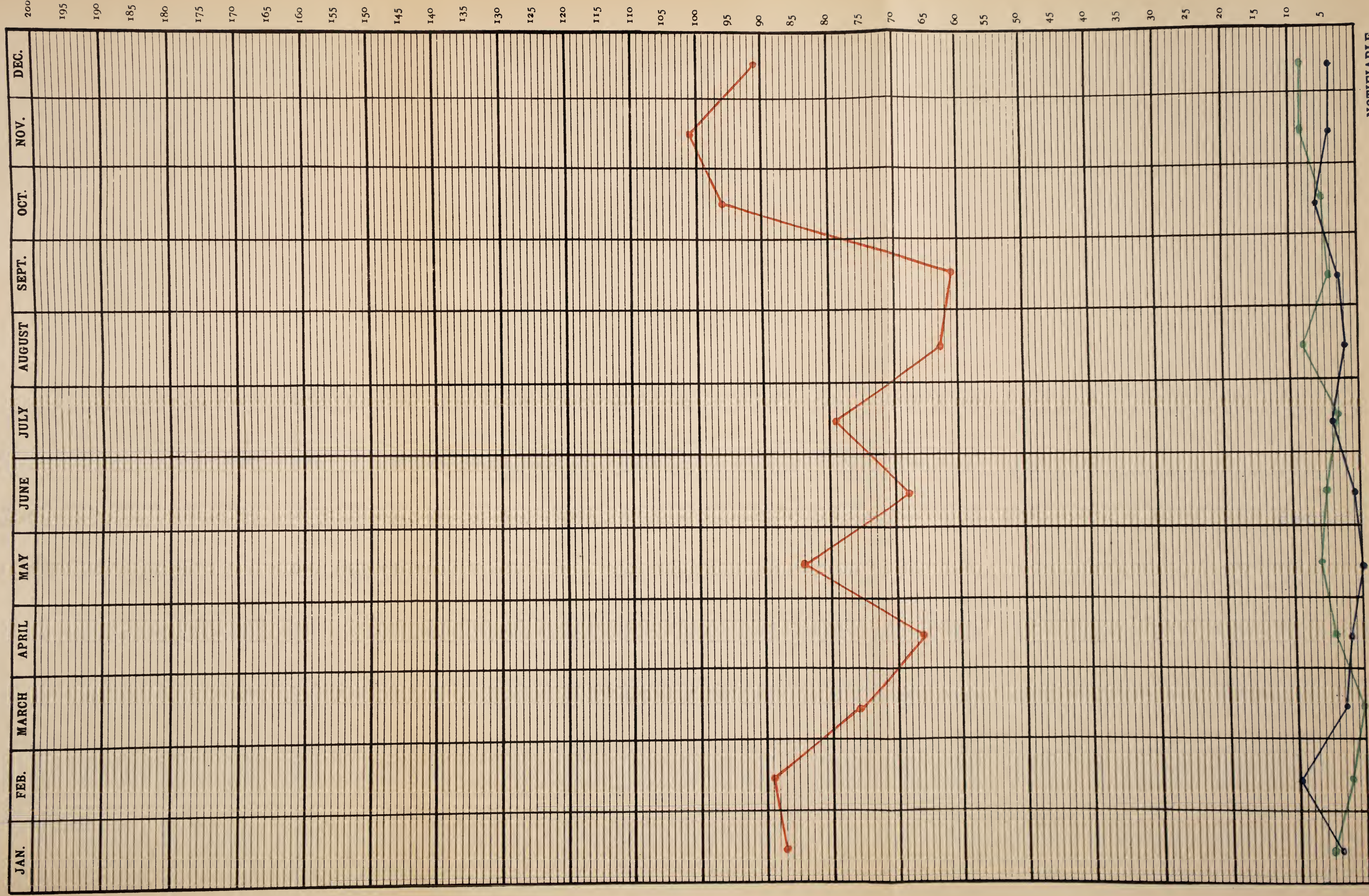
1. To visit from house to house systematically in such districts as shall be directed.
2. To distribute disinfectants where required, and to teach their proper uses.
3. To instruct those they visit in the rudiments of household hygiene.
4. To give hints to mothers on the feeding and clothing of their children.
5. To urge on all possible occasions the importance of cleanliness, thrift and temperance. Such work as this cannot be done by the Sanitary Inspectors and is apart from their duties altogether, to quote from Dr. Hill, of Birmingham, on this subject :

“ It may be well to state here that the work of the Health Visitors
 “ is quite different from that of the Inspector of Nuisances and
 “ Assistant Inspectors. Their duty is primarily to show people
 “ how to make the best of the existing conditions in their houses,
 “ how to bring up their children, and how to nurse their sick. They
 “ are not intended to inspect the sanitary arrangements at the houses
 “ they visit, although they are instructed to note any obvious defects
 “ in order that these may be reported to me and referred to the
 “ Inspector of Nuisances, whose duty it is to attend to them. One
 “ of the most noticeable features at the houses visited is the utter
 “ disregard of ventilation. Most of the houses are necessarily badly
 “ ventilated. It is, therefore, most desirable that the windows
 “ should be opened as much as possible. But unfortunately this is
 “ very often not done. An open chimney, of course acts as an

PLATE IV.

CHART SHEWING DEATHS EACH MONTH FROM ALL INFECTIOUS DISEASES CONTRASTED
WITH TOTAL DEATHS.

1902.



TOTAL DEATHS.
NON-NOTIFIABLE.

NOTIFIABLE.



“excellent outlet for bad air, and every room ought to be provided
“with one, which I am sorry to say is not the case.”

“I think after the foregoing description of the health visitors’ work,
“it will be unnecessary for me to say that it cannot fail to have a
“direct marked influence on the comfort and health of the poorer
“section of our population.”

I would again urge on you the almost necessity of such an appointment.

The table of deaths at the end of the report shews fully the causes of death of persons belonging to the Borough, and one cannot help being struck by the comparatively large number of persons of advanced age who have died during the year, thus it will be seen there were 50 of 75 years and upwards, and 11 of 85 years and upwards.

Cancer it will be noticed is responsible for 33. Heart disease for 79, but the most noticeable feature is the large number of children under five years of age who died of some disease of the respiratory organs, many of whom could be saved if they had a little more care and attention, or if their guardians were a little better informed as to feeding and hygiene of childhood.

Below is given a comparison of our Vital Statistics with those of the County, for the latter I am indebted to Dr. Hill, the County Medical Officer.

	County.				Borough.	
Estimated Population	849,620	...	62,614
Birth Rate	35·6	...	37·6
Death Rate	16·6	...	15·7
Zymotic Death Rate	1·68	...	1·78
Infant Mortality Rate (per 1,000 births)	...			139	...	120
Small-pox	0·001	...	0
Scarlet Fever	0·19	...	0·12
Diphtheria and Membranous Croup			...	0·26	...	0·41
Fever (Enteric and Continued)	0·14	...	0·12
Measles	0·37	...	0·52
Whooping Cough	0·38	...	0·30
Diarrhœa	0·31	...	0·06
Enteritis, &c.	0·26	...	0·09
Phthisis Death Rate	1·06	...	1·21
Respiratory Diseases Death Rate...			...	2·97	...	2·93
Bronchitis Death Rate	1·41	...	1·42
Pneumonia Death Rate	1·48	...	1·34
Pleurisy Death Rate	0·07	...	0·04

The death-rate in England and Wales for the year was	...	...	...	16.3
In the 76 great towns	...	...	...	14.7
The deaths under one year of age per 1,000 births were,				
in England and Wales	...	...	...	133
In the 76 great towns	...	...	...	145

NOTIFICATION OF INFECTIOUS DISEASES.

In order that the Infectious Diseases Notification Act be carried out as efficiently as possible, it is necessary that all cases to which the Act applies should be notified at as early a date as possible. In a great many cases there is often three or four days' delay, and in this way infection is very often spread, and in order that the weekly return which has to be sent to the Local Government Board each Monday should be accurate, it is necessary to receive all notifications as early as possible. Frequently I have had notifications sent in after my weekly return has been sent off, so that the statistics given are sometimes inaccurate. I would be greatly obliged, therefore, if the medical men in the district would notify all cases as soon as possible.

In all cases of infectious disease the premises are at once visited by one of the staff, and a report made to your Medical Officer. A notice is sent to the School Board, so that all scholars from the infected house are excluded from school until the house is certified as free from infection and has been disinfected.

The Librarian is also notified when any infectious case occurs in a house, and if there are any books from the Free Library in that house they are not again taken back to the Library, but are bought by the Health Committee for use in the Infectious Disease Hospital.

The following table shews the Infectious Diseases notified in the Borough each month during the year.

Total for the year 574.

Of these 165 were chicken pox, which was made a notifiable disease this year, in order to get information of any case of modified small-pox, which is so often and so easily mistaken for the milder disease, and often with disastrous results.

For comparison with other years we must deduct this 165 from the total, leaving 409, which, however, is a considerable increase on previous years, made up principally of scarlet fever and diphtheria

Month	Scarlet Fever	Enteric Fever	Small- pox	Diph- theria	Ery- sipelas	Puerp'l Fever	Contd. Fever	Chicken Pox	Total
January...	6	1	...	11	1	...	...	27	46
February	16	7	...	6	3	1	...	12	45
March ...	10	1	...	2	2	...	...	11	26
April ...	14	2	...	3	4	...	...	5	28
May ...	5	2	...	2	3	...	...	5	17
June ...	6	...	...	2	2	...	...	10	20
July ...	18	2	...	6	...	...	...	12	38
August ...	20	3	...	11	1	...	...	4	39
September	58	...	...	4	1	...	...	3	66
October...	44	3	...	11	1	...	1	18	78
November	35	4	...	11	1	...	...	28	79
December	44	2	...	11	5	...	...	30	92
	276	27	...	80	24	1	1	165	574

The following table shews, for comparison, the infectious diseases notified in the last 10 years:—

	Scarlet Fever	Enteric Fever	Small- Pox	Diph- theria	Ery- sipelas	Puerp'l Fever	Cont'd Fever	Typhus Fever	Total
1902	276	27	...	80	24	1	1	...	409
1901	116	22	...	20	29	2	...	...	189
1900	143	25	10	16	24	1	1	...	220
1899	41	31	...	15	28	1	2	...	118
1898	96	24	9	11	19	...	...	...	159
1897	87	39	...	6	23	...	2	...	157
1896	210	42	2	14	32	2	2	...	304
1895	184	63	1	23	8	1	3	1	284
1894	62	40	12	40	23	1	...	...	178
1893	133	50	7	14	19	1	...	...	224

The increase in numbers notified this year is very noticeable, principally scarlet fever and diphtheria.

It is also a noticeable feature how the infectious diseases have increased towards the end of July, *i.e.*, when the schools were re-opened after the summer holidays.

I think every child after holidays should bring a certificate stating that there had been no infectious disease in the house during the holidays, and no one should be admitted to school without such certificate. It is done in the case of private schools, and it would certainly prevent a large amount of sickness if it were done in public schools as well.

CLASSIFICATION OF NOTIFIABLE INFECTIOUS DISEASES IN WARDS IN WHICH THEY OCCUR.

North	...	...	59*	against	37	in 1901
West	...	...	40	„	31	„
Park	...	...	55	„	39	„
South-west	...	...	116	„	35	„
South-east	...	...	45	„	24	„
Central	...	...	60	„	14	„
North-east	...	...	29	„	5	„
Seaton	...	...	5	„	4	„

* Chicken-pox is not included in this column.

91 cases were removed to the Port Sanitary Hospital for infectious diseases during the year, viz. :—

Enteric Fever	...	...	...	...	6
Scarlet Fever	...	...	...	...	76
Diphtheria	...	...	...	...	9

ISOLATION HOSPITAL.

This year above others we have found the want of efficient hospital accommodation for our infectious cases, and it gives me great pleasure to record that a plot of ground, $8\frac{1}{4}$ acres in extent, has been purchased off Brearton Lane for the purpose of building a new Isolation Hospital.

That it is urgently required our statistics for this year plainly shew.

Representatives of the Corporations of West Hartlepool, Hartlepool and the Rural District Council met to consider the building of a joint hospital, but this plan was not agreed to, and as stated above the West

Hartlepool Corporation, recognising how necessary such a building was decided to build one of their own.

The plans are now been prepared, and a start will be made at as early a date as possible.

SMALL-POX.

We have again been fortunate enough to escape from this loathsome disease, although many cases have occurred in towns in Lancashire and Yorkshire, carried from town to town principally by tramps from Casual Wards and from Common Lodging Houses.

All the keepers of Common Lodging Houses in the Borough have been notified to at once report any case of sickness occurring in their houses to the Medical Officer, so that steps may at once be taken to isolate a case should one unfortunately arise, and immediate steps could also be taken to deal with those coming in contact with the infection.

Of late years, small-pox infection instead of attacking children, as it generally did in the pre-vaccination days, attacks adults who have only been vaccinated in infancy.

It is well known that the effect of vaccination in infancy passes off as adult life is approached, and to make vaccination the powerful weapon of defence which it undoubtedly is when carried out efficiently, as in Germany, re-vaccination ought to be compulsory, as well as primary vaccination.

There seems to be a prevailing opinion that one small vaccination mark is as good as three or four: unless a very large one this is not so, and the result of such imperfect vaccination, although it may please some parents, is an injustice to the child, being imperfectly protected whilst under the impression that it is perfectly so: at the same time, vaccination is discredited by those partially protected being attacked by small-pox.

SCARLET FEVER.

During the year 276 cases of scarlet fever have been notified, and 8 deaths have been registered from this disease, but it must not be forgotten that many more deaths are brought about by the sequelæ and complications of scarlet fever than by the fever itself.

Probably a large proportion of the 31 deaths registered as due to kidney disease owe their origin to this apparently slight illness, and some of the cases of heart disease in the same way could be traced to a similar origin.

In 1901 there were 116 cases and 5 deaths.

It will be noticed in the table previously given that there were comparatively few cases in the first half of the year, the cases beginning to increase in July and August, and remaining pretty constant for the last four months.

The mildness of attack is shewn by the small mortality, but this mildness is one great source of danger of spread, as so many cases go unrecognised, and I have no doubt many children have attended school right through an attack.

It is generally the mild cases that start the epidemics, and it is difficult to see how this is to be avoided, except by the slow education of parents.

Raising the school age to six or seven, besides being of decided advantage physically to the child, would, in a great measure, prevent epidemics, because it is invariably the younger children at school who are the first attacked, and the longer they escape, the less likely are they to become infected with any of the ordinary diseases of childhood.

A very efficient plan for preventing epidemics is carried out in some cities in America. A medical officer attends each school every morning between 9 and 10. He sees all children observed by the teacher to be ailing, or whose parents wish for an examination. If the child is not fit to be at school, a card telling the nature of the complaint, and advising as to the steps to be taken is sent to the parents.

The medical officer does not undertake the treatment, which must be carried out through the parents.

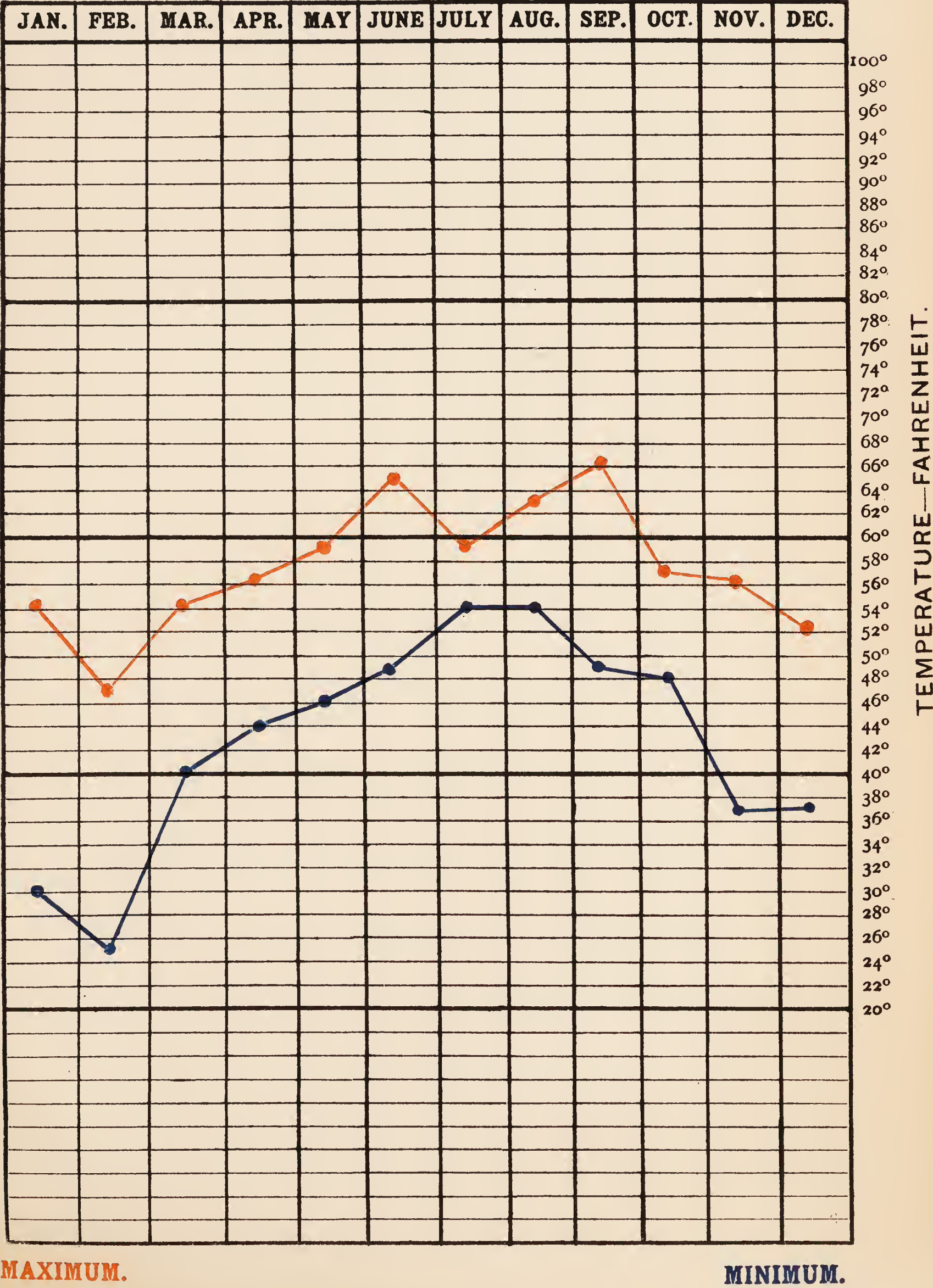
The child is again inspected before being allowed to return to school.

It is very difficult to obtain exact information as to the manner in which attendance at school affects growth and weight in children, but it is affirmed that during the first year at school, growth, both as regards height and weight, is less than during any preceding year. This is probably brought about by ill-health arising from imperfect sanitary conditions, especially inadequate supplies of fresh air and light.

Children who do not go to school till they are seven are found to become stronger and are in all respects better developed than those who go to school a year earlier, and I do not think their education suffers either in the long run.

PLATE II.
METEOROLOGICAL CHART
(THERMOMETER),
1902.

Observations taken at 10 a.m., under the direction of Mr. H. Lamb, Lynn Street,
West Hartlepool.



TYPHOID FEVER.

27 cases were notified during the year, with 7 deaths, against 22 cases with 6 deaths in 1901.

Smells from drains and accumulations of filth are often regarded as directly causing enteric or typhoid fever. That they are powerful predisposing causes is beyond doubt, and it may be supposed that persons exposed to their influence become more susceptible to the enteric poison, but the presence of the specific poison is essential for the disease.

Water and milk are the most important agencies in the spread of enteric fever. While water polluted with even excremental filth has often been drunk for years by numbers of people with perfect impunity so far as the appearance of enteric is concerned, the slightest contamination with the excreta of a case of enteric fever has over and over again been found to result in widespread outbreaks of the disease.

This is the main reason as many of the wells as possible are being stopped in the Borough, the water in them being so easily contaminated from the midden privies.

INFLUENZA.

Only five deaths are registered as being due to influenza, but one must not lose sight of the fact that diseases of the respiratory organs are very apt to follow even a mild attack.

Like so many other fevers, it is not so much the fever itself that is to be feared as the complications which so frequently follow.

EPIDEMIC DIARRHŒA.

This disease has not been at all prevalent owing to the cold and wet summer we experienced. Dry and hot weather appear to be necessary for the spread of this disease.

9 deaths were registered from diarrhœa and 17 from enteritis.

The following leaflet has been distributed pretty extensively in some parts of the town, with, I believe, satisfactory results.

PRECAUTIONS AGAINST DIARRHŒA.

Diarrhœa in children can to a great extent be prevented by taking care. You are therefore requested to take particular notice of the following:—

Babies should, if possible, be fed at the breast, but, failing this, they should have nothing but milk, or milk and water, till seven months old, and very little else till two years old.

Cleanliness of the feeding bottle is absolutely necessary for the health of infants. It is IMPOSSIBLE to keep a long rubber tube in a feeding bottle perfectly clean: you are therefore advised to use one of the old-fashioned boat or slipper shaped bottles with no tubing attached.

All milk should be boiled as soon as taken into a house, and put into a vessel previously scalded out, and covered with a clean cloth. Food should be kept in a clean, dry and well ventilated place.

Meat or fish slightly tainted, and fruit even beginning to decay, should never be eaten.

The windows throughout the house should be kept open day and night, especially in the bedrooms. Early in the day the bedclothes should be thrown back, and the slops taken away.

Fireplaces should not be stopped up: they act as good ventilators.

Offensive smells about the premises should be reported to the Medical Officer of Health or to the Sanitary Inspector, as bad smells will cause diarrhoea.

The yard drain should be kept clean and well flushed.

Particular attention should be paid to the ashpits: they should be kept perfectly dry. No slops, tea-leaves, cabbage, potato peelings, fish, &c., should be put in them; these can all be burnt in the kitchen fire.

As soon as a child starts with diarrhoea a doctor should be sent for. The child should be kept warm, and medical instructions as to diet should be strictly adhered to.

DIPH'THERIA.

80 cases of this disease have been notified, with 26 deaths, giving a case mortality of 32·5 per cent.

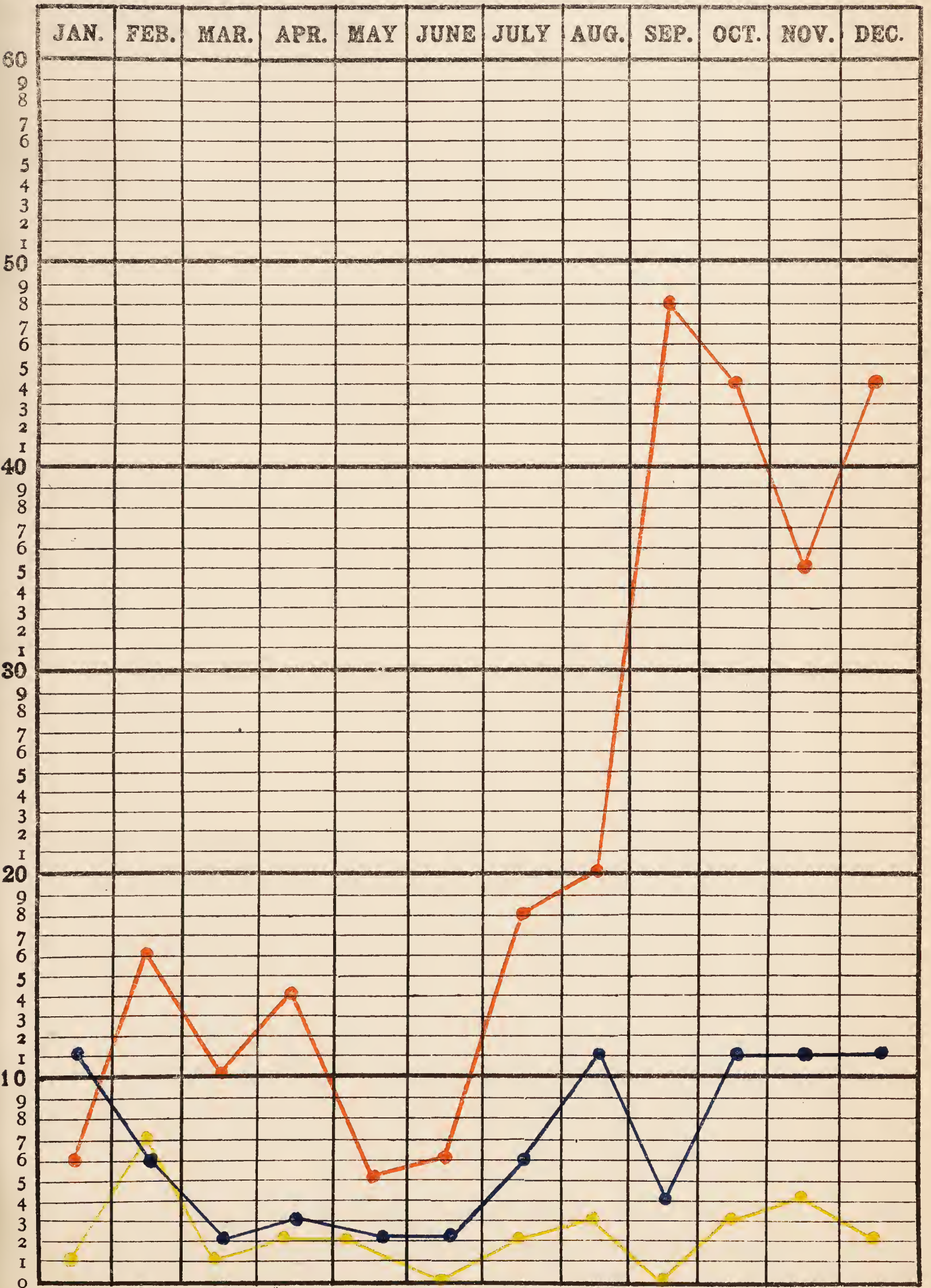
Only 9 of the 80 cases were removed to hospital for treatment, and in this of all other diseases prompt removal to hospital is one of the main safeguards we have against the spread of infection.

PLATE V.

CHART SHEWING NOTIFIABLE INFECTIOUS DISEASES
REPORTED EACH MONTH.

1902.

No. of Cases.



SCARLET FEVER.

DIPHTHERIA.

TYPHOID.

Diphtheria is peculiar in this respect, that a child may appear to be perfectly well, or have only a slight feeling of malaise, but complain of no symptom that would warrant one in suspecting diphtheria, and yet the characteristic bacillus may be found in that child's throat.

What is the result? The child continues going to school, mixes with other children and infects some. Those, of course, who live in unhealthy homes, or who have been exposed to smells from sewers or midden privies, &c., are more susceptible to the infection, and consequently take the disease more readily.

This, I think, is exactly what has happened in the Borough, as no contact could be traced in the majority of cases.

Smells, of themselves, will not cause diphtheria: the actual poison must be present to convey infection.

As time goes on, experience proves the great efficacy of antitoxin, not only as a curative, but also as a preventive agent, and I am pleased to record that much more use has been made of the stock kept in the Health Department, and many excellent results have been reported to me by those who have used it.

Diphtheria seems to have been more prevalent throughout the country lately.

MEASLES.

There were 33 deaths directly ascribed to measles, 20 being registered the previous year. The number of deaths, however, does not give any indication of the destruction of life due to it, since this disease is commonly associated with bronchitis and pneumonia, and undoubtedly many deaths which are due to measles are registered as due to one or other respiratory disease.

It is exceedingly difficult to prevent measles spreading, once it starts, owing to the long incubation period and the peculiarity of the infection, but that closure of the schools stamps it out very soon experience has proved over and over again.

WHOOPING COUGH.

19 deaths were attributed to this disease, against 20 the previous year.

This is one of the most painful and distressing of the diseases of childhood. All the 19 deaths were of children under two years of age.

The infectious nature of it seems to be lightly regarded, because it does not directly cause a large mortality: but indirectly it does, as a great many of the diseases of the chest can be traced to it, and that it causes a great amount of suffering cannot be doubted.

PHTHISIS.

The deaths from phthisis or consumption still continue about the same as formerly, in spite of all that is now known and precautions advised.

76 deaths have been registered, against 70 the previous year.

In addition, we have a large number of deaths from other forms of tuberculosis, viz. :—

Tuberculosis of the Brain	...	...	21
„ „ Abdomen	...	...	34
General Tuberculosis	...	...	8
Other forms of „	...	...	19
Total deaths from Tuberculosis	...	...	<hr/>158

The following information may prove useful to consumptives and those who look after them :

1. Consumption is a preventible disease which is caused by minute living germs called “tubercle bacilli,” which usually enter the body with the air breathed.

2. The matter which consumptive people cough or spit up contains the germs of the disease in great numbers. If this matter is spat upon the floors or the walls of any private or public place, or elsewhere, as soon as it becomes dry the germs of the disease which it contains are blown about and float in the air, like any other minute particles of dust, and are inhaled by anyone breathing that air; or they may fall on milk or other food, and gain access to the body with that food. These are the commonest ways in which the seeds of the disease enter the body of a healthy person.

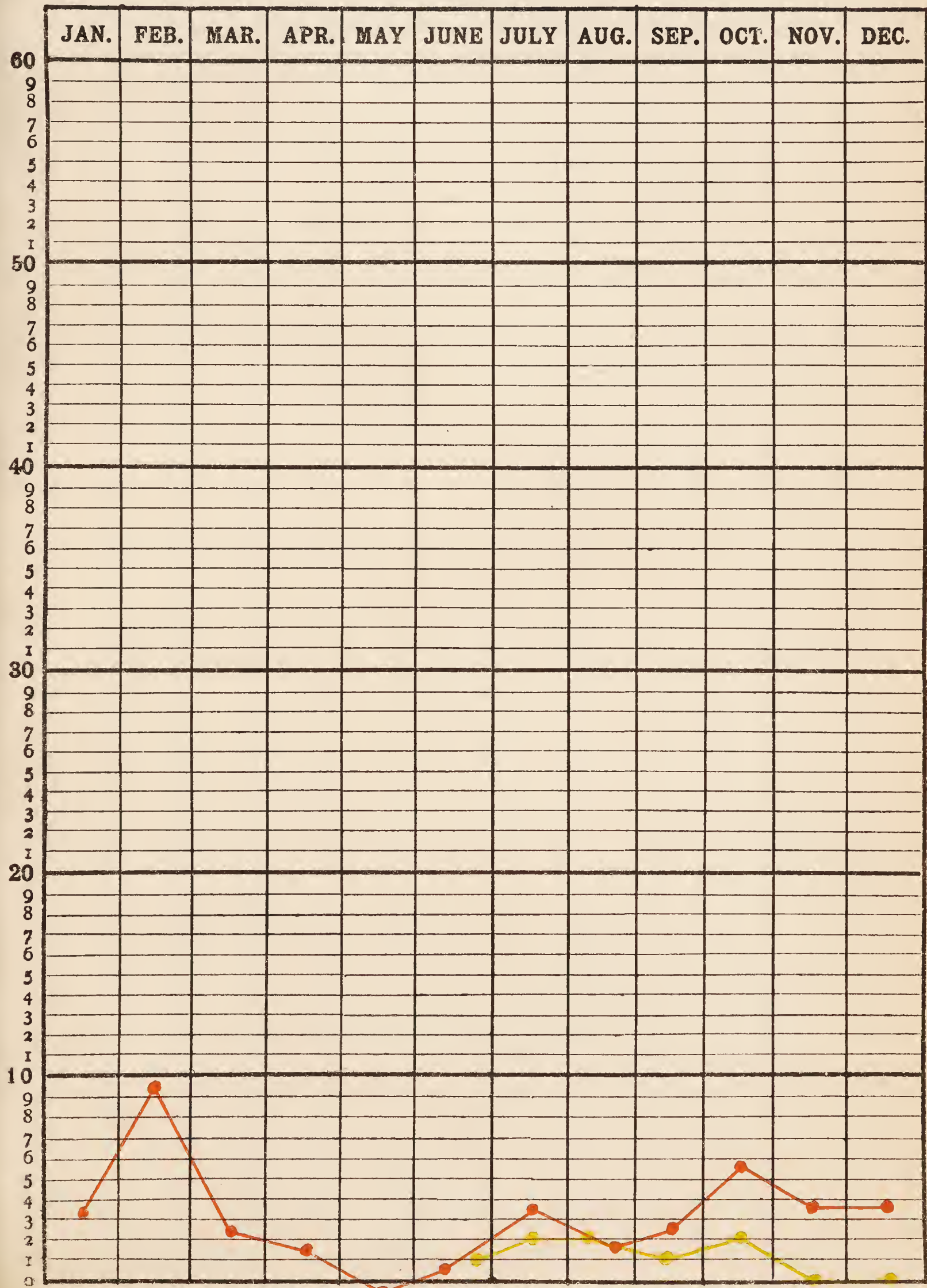
3. It may therefore be dangerous to sleep with, or live in close relationship with a consumptive, unless the patient is careful that what he coughs up is destroyed. A cup containing a little water should be used to spit in, so that the matter may not dry, and it should be emptied into the closet (not into the ashpit or into the roadway) and the cup should be

PLATE VI.

CHART SHEWING DEATHS EACH MONTH FROM DIARRHŒA
CONTRASTED WITH DEATHS FROM NOTIFIABLE
INFECTIOUS DISEASES.

1902.

No. of Cases.



NOTIFIABLE INFECTIOUS DISEASES.

DIARRHŒA.

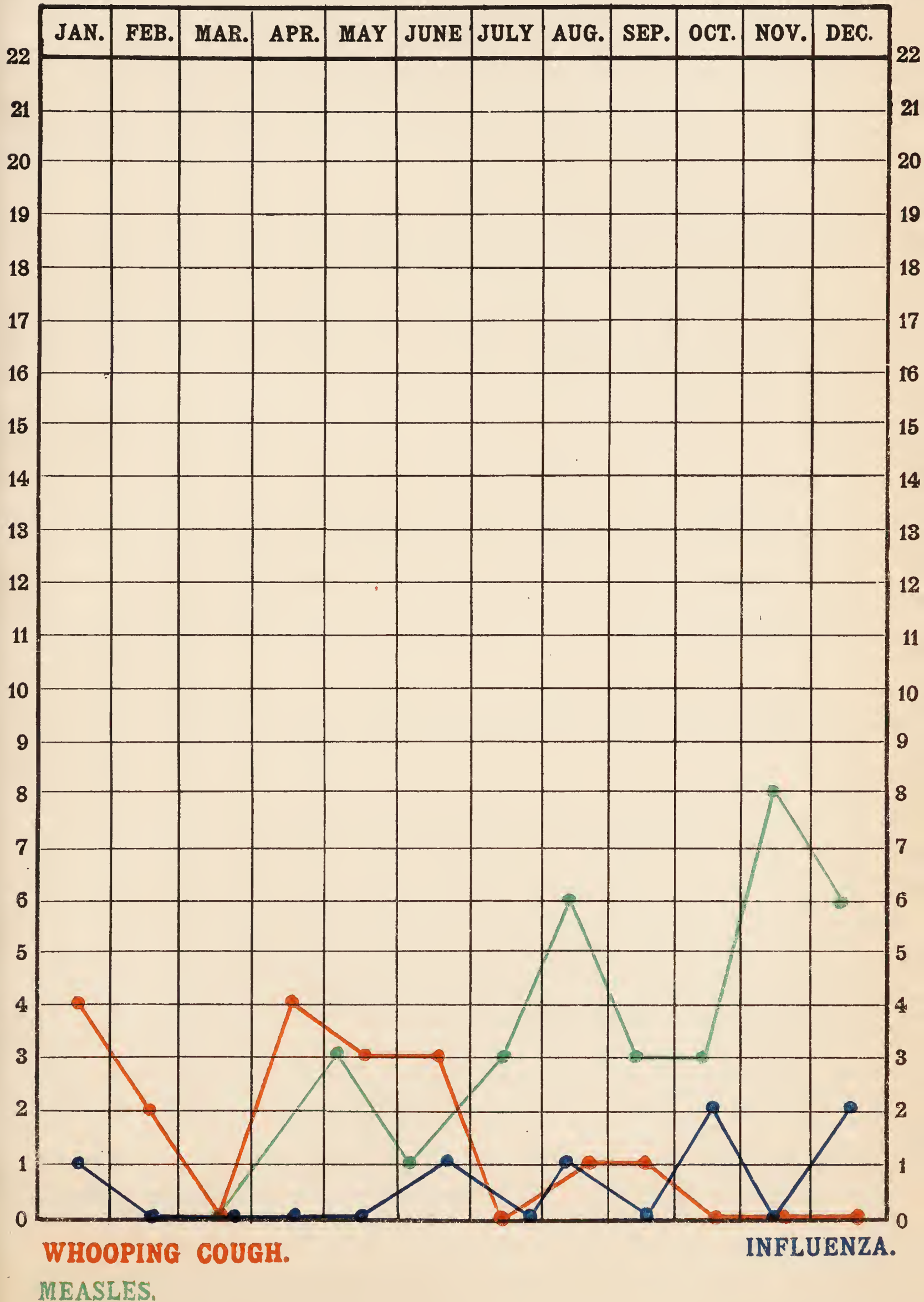
PLATE VII.

CHART SHEWING CAUSES OF DEATHS EACH MONTH DUE TO
NON-NOTIFIABLE INFECTIOUS DISEASES.

1902.

No. of Cases.

No. of Cases.



Carefully washed afterwards with boiling water. If the consumptive prefers to use cloths or handkerchiefs to spit in, they should be thrown upon the fire and burnt forthwith. He should take care that his hands, face and clothing do not become soiled with the matter coughed up, nor should it be swallowed. For similar reasons all consumptives should be clean shaved.

4. It is better for a consumptive to sleep alone, and the bed-clothing and personal clothing should be boiled and washed separately from the clothing of other people.

5. Tubercle bacilli are not only the cause of ordinary consumption of the lungs, but they may also give rise to consumption of the bowels and other parts of the body; and therefore milk and other uncooked food should be carefully protected from the tubercle bacilli. If such food be kept in a place to which a consumptive patient of careless habits has access, and who may spit upon the floor, the dry particles of the matter spat up may blow about with dust, and find access to milk and other food, and in this way contaminate it.

6. Cows suffer from consumption, and the milk from consumptive cows is liable to contain the tubercle bacilli. Milk had better be boiled for a few seconds, unless the consumer is sure that it comes from a healthy cow, and that it has not been exposed to danger of contamination afterwards. These precautions should be specially observed in the case of children.

7. Consumption is a disease from which large numbers of patients recover if the rooms they occupy are always kept thoroughly well ventilated and clean and free from dust.

8. Sunshine and fresh air destroy the tubercle bacilli and are the principal curative agents: the more sunshine and fresh air the consumptive patient gets, the more likely is he to recover.

9. Sanitary improvements which have been carried out in the Borough with a view to admit more pure air and sunshine to dwellings and to lessen overcrowding have, of late years, reduced the mortality considerably, but to reduce it still further, the people must help themselves by keeping their rooms clean and well ventilated, and by maintaining strictly temperate habits.

10. Rooms that have been occupied by consumptives should be thoroughly disinfected and cleansed before they are again occupied,

and the carpets and bedding should be disinfected ; in fact, so far as these precautions are concerned, consumption may be regarded in exactly the same light as any other infectious disease.

11. The officers of the Health Department are always ready to do the necessary disinfection, both of rooms and of clothing, free of charge.

DAIRIES, COWSHEDS AND MILKSHOPS.

Cowsheds	...	...	...	...	...	8
Dairies and Milkshops	...	...	...	...	...	108

These have all been regularly visited during the year.

Some of the cowsheds in the Borough are not in a satisfactory sanitary condition, but this I hope to deal with shortly in a special report.

In my opinion, there are far too many milkshops registered, and some of the premises used are not suitable for such a trade, knowing, as we do, how easily infection is conveyed in milk.

HOUSE REFUSE—REMOVAL AND DISPOSAL.

During the year the following quantities of refuse have been collected and disposed of :

House refuse	...	...	...	...	18,576 loads
Sundries (fish, eggs, paper, &c.)	...	...	...	...	1,953 „
Total destroyed at Destructor	...	...	...	...	20,529 loads
House refuse conveyed to farms	...	...	...	...	5,635 „
Total number of loads of refuse collected	...	...	...	...	26,164 „

There can be no doubt that burning is the most satisfactory method for the disposal of house refuse, and in order that all may be destroyed in this way, six more cells are shortly to be added to the six at present in use, so that all the refuse may be destroyed.

It is also proposed to erect baths in the manager's house for the use of the men engaged about the premises ; a wise and useful plan to adopt.

Use is made of the heat generated in the furnaces to convey steam to the Electricity Works adjoining.

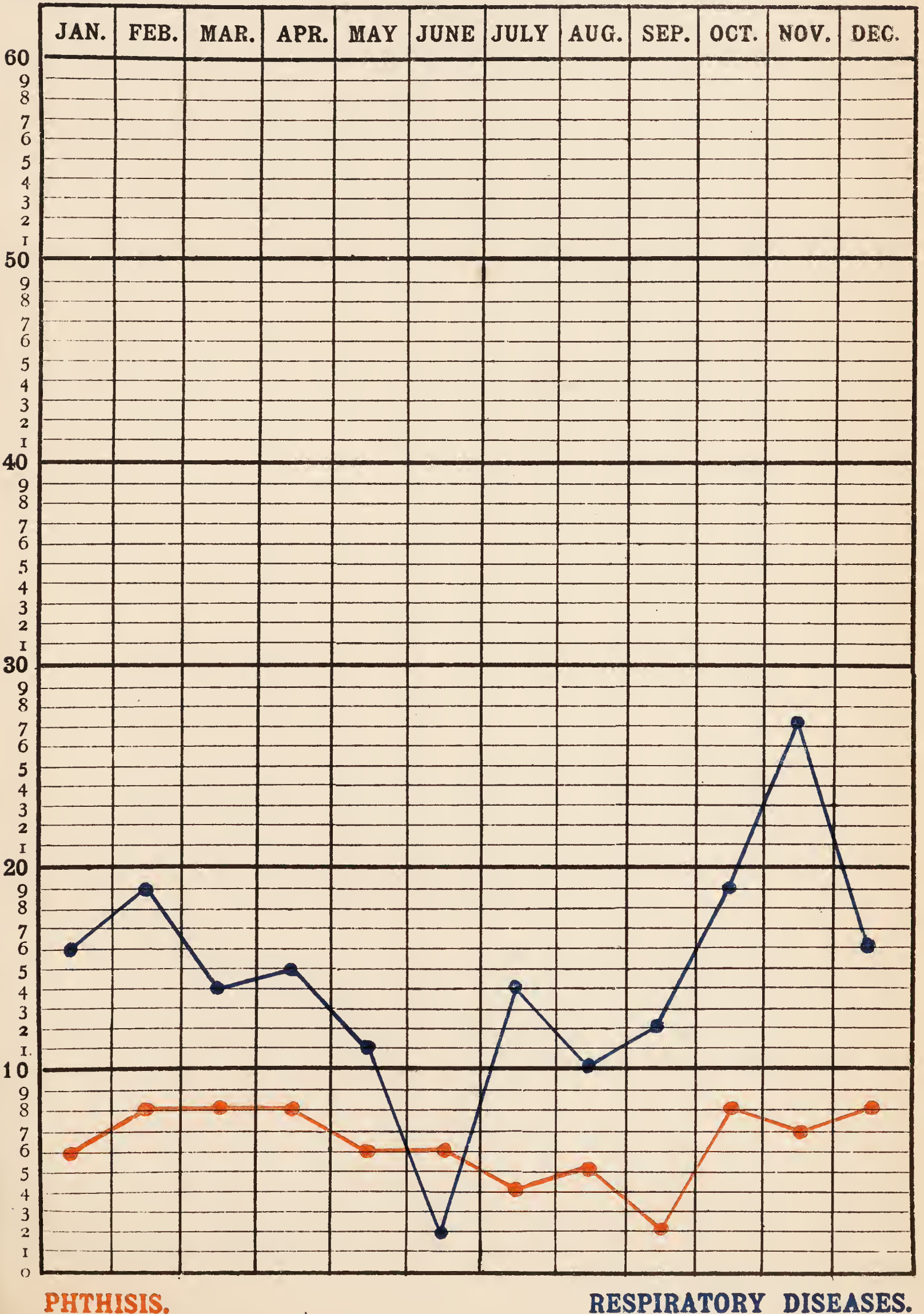
Many complaints have been received from householders of nuisance caused in the collection of house refuse. The methods employed are not

PLATE VIII.

CHART SHEWING DEATHS EACH MONTH FROM ALL RESPIRATORY DISEASES CONTRASTED WITH DEATHS FROM PHTHISIS.

1902.

No. of Cases.



all that could be desired, and as long as midden privies and wet pans are allowed to exist, complaints of nuisances will be received. The fault is not so much in the method of collection as in the manner in which the refuse has to be kept about the premises till the collections are made.

ABATTOIRS.

The work in the Abattoir continues to be carried on in a manner satisfactory, I think, to everyone concerned.

During the year there were killed at the abattoir—

	Total	Beasts	Sheep and Lambs	Calves	Pigs
This Year	24,580	4,484	13,309	677	6,110
Last Year	25,202	4,912	13,487	726	6,079
Increase	—	—	—	—	31
Decrease	662	428	178	49	—

OPEN SPACES.

This is an important question in a growing town, and continues to receive due attention from the Council.

Now that the management of public schools is about to come into their hands, I would again urge the advisability of having the playgrounds of all schools open in Summer evenings and on Saturdays for children to play in. I am sure it would be a great boon to the children and would keep them from playing so much about the streets.

The recently purchased sea banks between West Hartlepool and Seaton are about to be levelled and made into a promenade, but an otherwise very pleasant walk will be considerably spoilt unless something can be done to prevent such volumes of smoke coming from the works adjoining.

MORTUARY.

The old Mortuary in the rear of the Market has been entirely replaced by a more or less temporary structure, and it is now in a very satisfactory condition.

HOUSING OF THE WORKING CLASSES.

Much attention has been given to this branch of the work, systematic and regular house to house inspection is carried on. Altogether 3,274 houses have been inspected during the year, in these 1,447 defects were found, of a more or less serious nature, and to remedy these 1,228 notices were served on occupiers or owners.

COMMON LODGING HOUSES.

The Inspector has visited all the Common Lodging Houses daily, and occasionally during the night.

He has not at any time found any of them with more lodgers than they are registered to accommodate, and has no complaints to make as to their management.

They have all been kept fairly clean during the year.

FACTORY AND WORKSHOP ACT 1901.

This Act came into force on the 1st January, 1902. It repeals and consolidates all previous legislation on the subject, and imposes several new and important duties and powers on the District Council and on the Medical Officer of Health.

Under Sec. 132, every Medical Officer of Health is required in his annual report to deal specifically with the administration of the Act in workshops and workplaces (so far as the matters under the charge of the District Council are concerned), and he must send a copy of this part of his report to the Secretary of State.

Under Sec. 131, a register of all workshops in the district must be kept by the District Council. A register, with all the names of occupiers of Workshops, received from H.M. Inspector of Factories, is now kept.

Lists of home workers are to be sent to the District Council twice a year, on the 1st February and the 1st August, by occupiers of factories, workshops and other places, who give out certain classes of work to be done at home.

The following is a list of factories, workshops and workplaces which have been inspected in the Borough during the year.

Trade.					Number.
Joiners, builders, sawmills	...	...	...	...	69
French polishing, upholstering	...	...	...	...	6
Dressmakers, &c.	...	...	...	...	29
Printers	...	...	...	...	12
Mineral water manufacturers	...	...	...	...	9
Jam factories	...	...	...	...	2
Bakeries, retail	...	...	...	...	15
Do. wholesale	...	...	...	...	6
Sausage makers	...	...	...	...	6
Cement and mortar works	...	...	...	...	6
Boot repairers	...	...	...	...	7
Engineers, &c.	...	...	...	...	24
Corn grinding mills	...	...	...	...	4
Laundries	...	...	...	...	3
Sail makers...	...	...	...	...	3
Iron mills	...	...	...	...	7
Plumbers	...	...	...	...	12
Egg sorting and pickling	...	...	...	...	3
Tailors	...	...	...	...	15
Shipbuilding	...	...	...	...	2
Unclassified...	...	...	...	...	23
Total ...					263

The unclassified includes the following—bottling works, rope, paper, bottle washing, stone crushing, chemical manure, whiting, tripe, brick, sand, water, gas, and pickling works.

FACTORIES.

The duties of the District Council with regard to these are few, the main one being with regard to escape from fire.

Every factory employing more than 40 persons must, if erected since specified dates, be furnished by the District Council with a certificate as to adequate means of escape.

All the factories inspected were found to have sufficient means, the majority of them simply being open sheds, it is unnecessary to take any elaborate precautions for escape.

Another duty is as to the provision of suitable and sufficient sanitary conveniences.

WORKSHOPS AND WORKPLACES.

The requirements of the Act, which it is the duty of the District Council to enforce, are as follows :

(a) **CLEANLINESS.**—Every workshop and workplace must be kept in a cleanly state and free from effluvia.

This part of the Act has been satisfactorily carried out, as only in one or two instances was it necessary to order cleansing.

(b) **AIR SPACE.**—In no instance was overcrowding found in any of the workshops, but I have reason to suspect that some are during the busiest seasons seriously overcrowded. This will, of course, receive attention.

A workshop is deemed to be overcrowded unless in each room at least 250 cubic feet of air space (or during overtime 400) are allowed for each person employed in the room, and the Act requires a notice to be affixed in the workshop specifying the number of persons who may be employed in each room of the workshop.

(c) **VENTILATION.**—Every workshop must be ventilated in such a manner as to render harmless, as far as practicable, any gases, vapours, dust or other impurities generated in the course of the work, that are a nuisance or injurious to health. Workshops, however, where men only are employed are excluded from the operation of this requirement.

Ventilation was well carried out and efficient in all but two of the workshops, these have since been altered and are now satisfactory.

(d) **DRAINAGE OF FLOORS.**—In no instance was it found necessary to enforce this part of the Act.

(e) **SANITARY ACCOMMODATION.**—In districts where Part III. of the Public Health Amendment Act, 1890, is in force, every building used as a workshop must be provided with sufficient and suitable accommodation in the way of sanitary conveniences.

Nuisances were found in 36 workshops inspected, and all of them were in connection with the sanitary conveniences.

18 were found to have either no or insufficient accommodation.

10 privies were ordered to be cleansed.

7 were found in which the water closet or privy was defective,

1 privy was converted into a water closet.

Is a privy "sufficient and suitable accommodation in the way of sanitary convenience"? I think not.

In my opinion, all factories, workshops and workplaces which have privies in place of water closets, that is, of course, in towns where there is a water carriage system, are not carrying out the requirements of the Act, and should be compelled to convert all existing privies to water closets.

BAKEHOUSES.

Bakehouses are either factories or workshops according as they have or have not mechanical power, and thus come under the same obligations as other factories or workshops.

In addition, special duties devolve on the District Council.

The District Council must see that no retail bakehouse is started after August, 1901, the floor of which is more than 3 feet below the roadway, and after January, 1904, no underground bakehouse can be used, unless the District Council gives a certificate of suitability.

These bakehouses are a very important item in the Factory and Workshops Act, and have received special attention. Some of them are in very good condition, some require repairs and sanitary improvements, and one, at least, I have visited is quite unfit for the purpose.

HOME WORK.

No list of outworkers has been sent in by any of the occupiers of factories or workshops, nor were any found during the inspections, most of the work being done on the premises.

GENERAL WORK.

The following is a summary of the work done in the Health Department during the year, in addition to that already detailed:

Number of Notices Served	Nature of Nuisance	Number of Nuisances Registered
1	Clean out cesspool	1
31	Trap defective drains	67
2	Disconnect sink from sewer	2
109	Other faults	164
272	Cleanse dirty dwellings and workshops	286
37	Repair yard pavement	87
158	„ spouts and fall pipes	194
24	„ dwelling house roofs	45
20	„ dilapidated dwellings	33
108	Convert privies into water closets	308
9	Abate overcrowding... ..	8
1	House unfit for habitation	1
5	Cleanse common lodging houses	5
1	Repair privies	1
86	„ water closets... ..	103
19	Provide additional water closets	19
15	Remove accumulations of manure... ..	15
1	Cleanse pigstyes	1
3	Cleanse bakehouses	3
36	Remove animals improperly kept	35
2	Abate smoke nuisances	2
11	Provide dustpans	320
106	„ ashpit doors... ..	147
13	Clean out soft water tanks	24
26	Cease throwing slops into ashpits	28
3	Remove accumulations of stagnant water	3
5	Provide a pure water supply	5
2	Offensive trades	3
3	Close polluted wells	3
1,114 122*		1,913
1,236		

*Formal.

FOOD AND DRUGS ACT.

Articles				No. taken	Genuine	Doubtful	Adulterated
Milk	...	...	...	40	34	5	1
Butter	...	...	...	14	13	—	1
Lard	...	...	...	9	5	4	—
Ice Cream	...	...	...	2	2	—	—
				65	54	9	2

In addition, 9 samples of town's water were sent for analysis, 8 were certified good and wholesome, and 1 was certified as containing a quantity of sand and clay in the half gallon.

Six samples were also taken from 5 wells, 1 was certified as fit for drinking purposes, one was doubtful and 4 were bad. All five wells were condemned and subsequently filled in.

375 baskets of plums were condemned as unfit for food, at the Steam Navigation Warehouse.

HOUSES, &c., DISINFECTED DURING THE YEAR.

261 houses were fumigated after Infectious Disease.

The following articles have been disinfected at the disinfecting chambers :—

Beds and Bedding	...	...	...	...	383
Pillows and Bolsters	...	...	...	...	643
Carpets and Rugs	...	...	...	...	89
Articles of Clothing...	...	...	...	...	134
Sheets, Blankets, Quilts	...	...	...	...	628
Sundry Articles	...	...	...	...	1001

2878

57 articles have been destroyed.

LEGAL PROCEEDINGS.

Unfortunately it has been necessary to take legal proceedings in the following cases, and with the result shewn :—

Exposing bad meat—fine £10, costs 8/6.

Failing to report case of infectious disease—fine 10/-, costs 8/6.

Not keeping premises clean and sanitary—fine £1, costs 7/6.

Failing to repair w.c. after notice. Withdrawn. Abated in meantime, costs 4/-.

Failing to repair roof, &c., after notice. Withdrawn. Abated in meantime, costs 4/-.

Failing to remove offensive accumulation—fine 10/-, costs 8/6.

Pigs kept in close proximity to house. Withdrawn. Abated. Costs 4/-.

2 inhabiting house, after it was condemned—costs in each case 4/-

Butter adulteration—fine 10/-, costs 7/6.

Milk adulteration—fine £2, costs 8/6.

In conclusion, I take this opportunity of tendering my sincere thanks to the members of the Health Committee for their invariable kindness during the year.

I have also to express my indebtedness and thanks to Mr. Councillor Lamb for so kindly supplying me with his meteorological charts, to Mr. J. W. Brown, Borough Engineer, and to Mr. W. Gill Hodgson, Borough Accountant, who have always been so willing to help me in my work.

To the members of the staff of the Health Department I would also express my thanks for the efficient way they have carried out their respective duties.

A map of the Borough is again appended, brought up to date, with the new streets marked in red, and the “fever spots” as usual.

I have the honour to be, Gentlemen,

Yours faithfully,

FRED H. MORISON, M.D., D.P.H.,
Medical Officer of Health.

APPENDIX A.

Advice to Parents upon the Diet and Management of Infants.

WASHING.

During the first four months of life the child should have a warm bath each night and morning, the temperature of the water being about 90° F., and the best soap only employed. At a later period cooler water should be used (80° to 75° F.). On each occasion the whole body should be thoroughly cleansed, especially in the folds of the skin, and thoroughly dried with a warm soft towel.

CLOTHING.

The child must be warmly clad in woollen or flannel garments, the neck, arms, and thighs being especially protected against exposure. Tight bandaging around the waist should be avoided. The napkins require to be examined frequently, and to be changed immediately they become damp.

SLEEP.

The child should be encouraged to sleep in a cot from birth, care being taken that the covering is sufficiently warm, and adjusted when disarranged. The infant should be taught from the earliest times to sleep at regular intervals. No soothing draughts must be employed, except under strict medical supervision.

EXERCISE.

When the weather is fine the child should be taken out into the fresh air at least twice every day, care being taken to protect the body from the cold and the head from the rays of the sun.

The bedroom must be large, light, and well ventilated, but draughts must be carefully guarded against.

SUCKLING.

If the mother be in good health and has sufficient milk, the infant should receive no other food until seven months old. For the first two months the breast should be given at regular intervals of two hours; between the second and fourth month every two hours and a half; and from the fourth to the seventh month every three hours. The infants should be taught to abstain from food between the hours of 11 p.m. and

5 a.m., in order to ensure six hours sleep both to itself and its mother. After each meal the nipple and breast must be carefully washed and dried, and any indication of soreness or abrasion should receive immediate attention. If the mother has not sufficient milk to nourish the child, or is unable to feed it at regular intervals, the breast must be supplemented by *cows' milk* properly diluted.

WEANING.

This should always be performed gradually, and if possible during the cool months of the year. *Cows' milk*, sterilised and diluted with barley water, and occasionally thickened with some form of malted food, is the most convenient diet after the cessation of nursing.

ARTIFICIAL FEEDING OF INFANTS.

GENERAL RULES.

1. For the first six months of life the food should consist entirely of milk. After that period some form of farinaceous food may be required.

2. *Cows' milk*, being cheap and easily obtained, is most suitable in ordinary cases. Under certain conditions, however, asses' or goats' milk may be preferred.

3. Young infants are unable to digest pure cows' milk, owing to its extreme richness and its tendency to produce large masses of curd in the stomach. In all cases, therefore, the fresh milk must be suitably diluted with barley or rice water.

4. The milk should be given every two hours during the first two months, and subsequently every two and a half or three hours, except between the hours of 11 p.m. and 5 a.m., when the child should be encouraged to sleep.

5. As soon as the bottle has been emptied, it should be removed, and the child's mouth carefully wiped with a piece of soft rag soaked in warm water. The child should never be permitted to sleep with the teat in its mouth.

THE MILK:—A fresh supply of milk should be procured twice a day, but only in quantities requisite for immediate use. The slightest degree of acidity, as evidenced by the red colouration of a piece of blue litmus paper, renders the milk unfit for use. Immediately the milk is received it should either be well boiled or sterilised, and afterwards kept in a cool place.

STERILISATION:—This is most conveniently effected by filling three or four feeding bottles with the quantity of diluted milk appropriate for each meal, and firmly plugging their mouths with cotton wool. The bottles are then placed upright in a small saucepan containing water, and the whole placed upon the fire and boiled for forty minutes. When required for use, the bottles are immersed in hot water, in order to warm their contents to the temperature of the body, the cotton wool withdrawn, and a clean india-rubber teat fixed over the mouth.

CONDENSED SEPARATED MILK:—This contains only one tenth the amount of fat (cream) of cows' milk, and is therefore *quite unsuitable as a food for infants*. Ten half-pound tins require to be purchased to obtain the same amount of fat as is in *one pint* of good new milk.

THE FEEDING APPARATUS:—This must be as simple as possible and capable of being easily and thoroughly cleansed. All that is necessary is an oval bottle of sufficient capacity and provided with a soft india-rubber teat which can be drawn over the neck. It is wise to keep at least four of these bottles in constant use. Immediately after a meal the teat is disconnected, turned inside out and well scrubbed with a clean tooth brush. It is then placed in a solution of boracic acid, care being taken to rinse it well in cold water before its next term of duty. The bottle itself is well cleansed, and if necessary boiled in a weak (one per cent.) solution of soda, and kept filled with some mild antiseptic until again required.

SCHEME OF DIET.

For the First Week of Life.

Cows' milk, 1 tablespoonful; thin barley water, 1 tablespoonful; milk sugar, 15 grains (or as much as would cover a threepenny piece); *or*

Whey, 3 teaspoonsful; cream, 2 teaspoonsful; milk sugar, 10 grains; hot water, 3 teaspoonsful.

Every two hours.

From the Second to the Fourth Week.

Cows' milk, two tablespoonsful; barley water, two tablespoonsful; cream, 2 teaspoonsful; milk sugar, 30 grains; *or*

Cows' milk, 2 tablespoonsful; cream, 2 teaspoonsful; milk sugar, 15 grains; water, 1 tablespoonful.

Every two hours.

From the Fourth to the Eighth Week.

Cows' milk, 9 teaspoonsful ; barley water, 6 teaspoonsful ; cream, 2 teaspoonful ; milk sugar, 30 grains ; water, 1 tablespoonful ; *or*

Cows' milk, 2 tablespoonsful ; cream, 1 tablepoonful ; sugar of milk, 30 grains ; water, 10 teaspoonsful.

Every two hours.

From the Third to the Sixth Month.

Cows' milk, 5 tablespoonsful ; barley water, $1\frac{1}{2}$ tablespoonsful ; milk sugar, 60 grains ; cream, 5 teaspoonsful ; water, $2\frac{1}{2}$ teaspoonsful ; *or*

Cows' milk, 5 tablespoonsful ; cream, 1 tablespoonful ; milk sugar, 60 grains ; water, 2 tablespoonsful.

Every three hours.

From the Seventh to the Tenth Month.

(Five meals a day.)

First Meal (7 a.m.)—Cows' milk, 13 tablespoonsful ; cream, 1 table-spoonful ; milk sugar, 60 grains ; water, two tablespoonsful.

Second Meal (10.30 a.m.)—Add to the foregoing one tablespoonful of malted food.

Third Meal (2 p.m.)—Same as second.

Fourth Meal (6 p.m.)—Ditto.

Fifth Meal (10 p.m.)—Same as first.

From Tenth to Twelfth Month.

Five meals a day, with the addition of the yolk of an egg, stale bread crumbs, oatmeal, or wholemeal flour occcasionaly.

TO MAKE BARLEY WATER.

INGREDIENTS.—2 ozs. pearl barley, 2 quarts of boiling water, 1 pint of cold water.

MODE.—Wash the barley in cold water ; put it into a saucepan with the above proportion of cold water, and when it has boiled for about a quarter of an hour, strain off the water, and add the 2 quarts of fresh boiling water. Boil it until the liquid is reduced one half ; strain, and it will be ready for use.

These quantities ought to make one quart of barley water.

APPENDIX B.***INFECTIOUS DISEASES.***

*Instructions for preventing the spread of Scarlet Fever, Typhoid Fever, Small-pox,
and other Infectious Diseases.*

To Mr.....of.....

It having been reported to the West Hartlepool Corporation that a case of.....has occurred on the premises occupied by you, at the above address, you are informed that you should—

1. Separate the sick person from the rest of the family, and remove carpets, curtains, and other unnecessary woollen or linen articles from the sick room.

2. Admit fresh air by opening the upper window-sash. Keep the fire lighted, even in summer, to promote ventilation. Allow air to pass freely through the house by means of open windows and doors. Keep the door of the sick room shut.

3. Hang up a sheet outside the door of the sick room, and keep it wet with a quarter pint of carbolic acid (No. 4), mixed in a gallon of water.

4. Receive all discharges from the patient into a solution of carbolic acid. Add carbolic acid plentifully to the discharges before emptying them into the closet.

5. Pour daily into every sink, closet, or privy, a quantity of the above-named disinfectant.

6. All cups, glasses, spoons, etc., used by the patient, should be first washed in the solution of carbolic acid or sanitas, and afterwards in boiling water.

7. No article of food should be allowed to remain in the room. Any food left by the patient should be burned.

8. All bed and body linen used by the sick person should be at once steeped for a few hours in any of the above-mentioned solutions and afterwards BOILED in water.

9. Instead of handkerchiefs, small pieces of rag should be used, and these should be burned when soiled.

10. Persons attending on the sick should wear garments made of cotton or other washable material. Woollen dresses should not be worn. The attendants should wash their hands, after waiting on the sick person, using carbolic soap.

11. The sick room must on no account be visited by others than those in immediate attendance on the sick, as visitors are very liable to carry away infection.

12. When recovering, and while the body of the patient is peeling, camphorated or carbolised oil should be rubbed over the sick person every day. The sick person must not be allowed to mix with the rest of the family until the peeling has entirely ceased.

13. Before patients finally leave the sick room they should be carefully washed all over in a bath containing a little carbolic acid; they may then leave the sick room, wrapped only in a clean blanket, so that their clothes are not exposed to infection.

14. When the sickness has terminated, the sick room should be cleansed, and information sent to the Health Office, when an inspector will attend and thoroughly fumigate the place, and disinfect all clothing that has been in use in the sick room. Afterwards, the room should be freely ventilated and the ceiling lime-washed, the paper stripped from the walls and burned; if the walls have been previously lime-washed, lime-washing should be repeated; and the furniture and all wood-work washed with carbolic soap and water. All bedding and articles that cannot be washed and boiled must be disinfected at the Corporation Disinfecting Chamber. Until this process of disinfection is properly carried out the room cannot be safely occupied.

15. Children must on no account be allowed to attend school from a house in which there is infectious disease.

16. In case of death, the body should not be removed from the room, except for burial, unless taken to a mortuary, nor should any article be taken from it until disinfected, as directed in Rule 14. The body should be quickly put into a coffin with 2lbs. of carbolic acid powder. The coffin should be fastened down and the body buried without delay.

N.B.—Carbolic Acid and other disinfectants may be bought of any Druggist, or may be had gratis at the office of the Sanitary Inspector, Municipal Buildings, by those who cannot afford to buy them.

PENALTIES.

Attention is particularly directed to the following provision of the Public Health Act in reference to "Infectious Diseases"

1. The owner or occupier may be required to lime-wash and cleanse any house or rooms, and the articles in it likely to retain infection—where infectious disease has existed—under a penalty not exceeding 10/- a day for neglect.

2. If any person suffering from any dangerous infectious disorder shall enter a cab or other public conveyance without informing the driver thereof that he is so suffering, he shall be liable to a penalty not exceeding £5.

3. Any person suffering from any dangerous infectious disorder—such as fever, scarlet fever, small-pox, etc.—who exposes himself in any street, school, church, chapel, theatre, or other public place, or in any omnibus, or other public conveyance, and any person in charge of one so suffering, who so exposes the sufferer, shall be liable to a penalty not exceeding £5.

4. Any person who, without previous disinfection gives, lends, sells or moves to another place, exposes any bedding, clothing, rags, or other things which have been exposed to infection, becomes liable to a penalty not exceeding £20.

5. Any person who lets a house, room, or part of a house, in which there has been infectious disease, without having such house or room, and all articles therein liable to infection, disinfected, is liable to a penalty not exceeding £20.

6. If any person who lets or shows for hire any house or part of a house makes any false statement as to the fact of there being in such house, or having within six weeks previously been therein, any person suffering from an infectious disease, such person answering falsely shall be liable to imprisonment, with or without hard labour, or to a penalty not exceeding £20.

I.—Table of BIRTHS AND DEATHS occurring in the County Borough of West Hartlepool, for the 11 years ended 1902. (FOR THE WHOLE DISTRICT.)

YEAR.	Population estimated to middle of each Year	BIRTHS.		DEATHS UNDER ONE YEAR OF AGE		DEATHS AT ALL AGES. TOTAL		Deaths in Public Institutions	Deaths of Non-residents registered in District †	Deaths of Residents registered beyond District †	DEATHS AT ALL AGES NETT	
		Number	Rate*	Number	Rate per 1,000 Births registered	Number	Rate*				Number	Rate*
I	2	3	4	5	6	7	8	9	10	11	12	13
1892	42,476	1,648	38·8	219	132	673	15·8	..	..	43	716	16·8
1893	46,435	1,667	35·9	305	182	804	17·3	..	..	50	854	18·3
1894	48,195	1,651	34·4	207	125	647	13·4	..	..	54	701	14·6
1895	50,020	1,741	34·8	259	148	734	14·6	..	2	81	815	16·2
1896	51,920	1,688	32·3	213	126	694	13·3	..	6	65	753	14·5
1897	53,880	1,798	33·3	227	129	683	12·6	..	6	73	750	13·9
1898	58,500	1,611	27·5	290	180	809	13·8	..	7	64	866	14·8
1899	61,000	2,063	33·8	394	191	1,053	17·2	..	6	75	1,122	18·4
1900	61,500	2,162	35·1	280	129	891	14·4	..	11	82	962	15·6
1901	62,614	2,261	36·1	323	142	965	15·3	..	20	98	1,043	16·6
Averages for years 1892-1901	53,654	1,829	34·0	271	148	795	14·8	..	8	68	858	15
1902	62,614	2,357	37·6	283	120	893	14·2	..	8	98	983	15·7

*Rates calculated per 1,000 of estimated population.

†By the term “Non-residents” is meant persons brought into the district on account of illness, and dying there; and the term “Residents” is meant persons who have been taken out of the district on account of illness, and have died elsewhere.

- I. Institutions within the District receiving sick and infirm persons from outside the District.—None.
- II. Institutions outside the District receiving sick and infirm persons from the District—

Asylum, Sedgfield.
Hospital, Hartlepool.
Port Sanitary Infectious Diseases Hospital.
Workhouse, Throston.
- III. Other Institutions, the deaths in which have been distributed among the several localities in the District —None.

Total population at all ages.....62,614
Number of Inhabited houses.....11,797
Average Number of persons per house5·3

Area of District in acres
(exclusive of area covered by water) } High Water3,555 acres.

At Census of 1901.

II.—Table of BIRTHS AND DEATHS occurring in the County Borough of West Hartlepool, for the years 1898 to 1902 (CLASSIFIED IN WARDS).

NAMES OF LOCALITIES WARDS		1. NORTH				2. WEST				3. PARK				4. SOUTH-WEST				5. SOUTH-EAST				6. CENTRAL				7. NORTH-EAST				8. SEATON			
YEAR		Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year	Population esti- mated to middle of each Year	Births registered	Deaths at all Ages	Deaths under 1 year
		a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.	a.	b.	c.	d.
1892	..	}																															
1893	..																																
1894	..																																
1895	..																																
1896	..																																
1897	..																																
1898	..	7,190	..	93	29	9,380	..	111	46	7,785	..	89	25	9,960	..	136	54	7,868	..	123	48	9,660	..	151	60	4,418	..	66	19	2,214	..	40	9
1899	..	7,672	288	107	50	10,159	364	135	51	8,425	237	117	46	10,290	369	150	69	8,221	293	190	65	9,497	329	198	73	4,586	112	86	25	2,150	71	40	11
1900	..	7,638	290	99	38	10,233	379	138	37	8,569	275	92	32	10,389	381	130	41	8,345	321	139	48	9,684	347	184	54	4,632	108	78	17	2,215	61	31	12
1901	..	8,131	305	93	31	10,692	406	127	47	8,415	234	120	44	11,240	476	177	55	8,076	319	136	45	9,527	349	196	72	4,023	107	65	16	2,066	65	31	11
Averages of Years 1892 to 1901																																	
1902	..	8,131	346	110	46	10,691	431	132	42	8,415	255	84	17	11,240	477	188	65	8,076	329	130	38	9,527	345	154	51	4,481	104	53	11	2,066	70	42	13

* These data cannot be ascertained.

FRED H. MORISON, M.D., D.P.H.

III.—Table shewing CASES OF INFECTIOUS DISEASE notified in the County Borough of West Hartlepool during the year 1902.

NOTIFIABLE DISEASE	CASES NOTIFIED IN WHOLE DISTRICT							TOTAL CASES NOTIFIED IN EACH LOCALITY (WARDS)								No. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY							
	At all Ages	At Ages—Years						1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
		Under 1	1 to 5	5 to 15	15 to 25	25 to 65	65 and upwards	North	West	Park	South- West	South- East	Central	North- East	Seaton	North	West	Park	South- West	South- East	Central	North- East	Seaton
Small-pox.. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	79	1	25	39	8	6	..	10	9	22	27	2	7	2	..	3	1	4	..	..	1	..	..
Membranous croup ..	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas	24	1	..	2	4	17	..	5	4	..	6	3	3	3	..	..	..	..	..	..	..	..	..
Scarlet fever	276	4	82	170	17	3	..	34	26	33	75	38	43	22	4	13	1	4	18	14	17	8	1
Typhus fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric fever	27	..	3	3	10	11	..	8	1	..	7	2	7	2	..	1	..	..	2	1	1	1	..
Relapsing fever .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued fever	1	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal fever	1	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox	165	21	88	52	2	2	..	22	29	17	43	19	14	4	14	..	..	..	..	..	..	..	..
Totals	574	27	199	267	42	39	..	81	69	72	159	64	74	33	18	17	2	8	20	15	19	9	1

FRED H. MORISON, M.D., D.P.H.

IV.—Table shewing CAUSES OF DEATHS (WITH AGES) occurring within the County Borough of West Hartlepool, during the year 1902.

CAUSES OF DEATH.	DEATHS IN WHOLE DISTRICT AT SUBJOINED AGES							DEATHS IN LOCALITIES (AT ALL AGES) WARDS.							
	All ages	Under 1	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and up- wards	North	West	Park	South- West	South- East	Central	North- East	Seaton
Small-pox .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles	33	9	22	2	..	..	..	4	2	1	11	7	4	..	4
Scarlet fever	8	..	4	3	1	..	..	1	..	1	4	1	1	..	..
Whooping-cough	19	10	9	..	..	..	..	4	4	..	..	6	3	..	2
Diphtheria and membranous croup	26	2	14	9	..	1	..	2	2	9	8	1	4	..	..
Croup	2	..	2	..	..	..	..	..	..	..	..	2	..	..	..
Fever { Typhus Enteric Other continued	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	7	..	..	1	2	4	..	1	..	..	5	..	..	1	..
Epidemic influenza	5	2	..	..	..	2	1	..	1	2	1	..	1	..	..
Cholera .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea	9	5	3	1	..	..	..	1	..	..	..	3	3	1	1
Enteritis	17	13	2	..	..	2	..	5	1	4	2	2	1	2	..
Puerperal fever	2	..	..	..	..	2	..	..	..	..	1	..	1	..	..
Erysipelas .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Other septic diseases	3	..	1	..	..	2	..	1	..	..	..	2	..	..	..
Phthisis	66	1	3	6	13	41	2	6	15	7	14	6	14	3	1
Other tubercular diseases	73	41	16	5	1	10	..	10	16	5	10	15	12	4	1
Cancer, malignant disease	26	..	..	..	..	16	10	..	5	4	7	4	2	3	1
Bronchitis	94	37	22	2	1	5	27	8	14	5	25	12	13	12	5
Pneumonia	78	18	29	4	3	22	2	11	12	4	18	12	13	3	5
Pleurisy	3	..	..	..	..	2	1	..	..	1	..	1	..	1	..
Other diseases of respiratory organs	6	1	..	1	..	3	1	2	..	1	2	..	1	..	..
Alcoholism, cirrhosis of liver	4	..	..	..	..	4	..	..	..	..	..	1	1	2	..
Venereal diseases	1	1	..	..	..	..	..	..	..	..	1	..	..	..	..
Premature birth	29	29	..	..	..	..	..	4	3	2	8	3	6	..	3
Diseases and accidents of parturition	9	..	..	..	2	7	..	3	1	..	1	2	2	..	..
Heart diseases	74	1	1	2	6	41	23	4	12	7	13	10	18	6	4
Accidents	27	4	10	1	1	9	2	4	1	1	7	3	4	5	2
Suicides	1	..	..	..	..	..	1	..	..	1	..	..	..	..	..
All other causes	271	103	26	14	14	57	57	39	43	29	50	37	50	10	13
All causes	893	277	164	51	44	230	127	110	132	84	188	130	154	53	42

V.—Tables shewing COMPLETE CLASSIFICATION OF CAUSES OF DEATHS (WITH AGES) *occurring within the County Borough of West Hartlepool, during the year 1902.*

No.	Diseases	AGES														All Ages
		0	1	5	10	15	20	25	35	45	55	65	75	85		
1	Small-pox															
	(a) Vaccinated.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(b) Unvaccinated .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(c) No statement.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	Measles	9	21	3	..	..	..	..	..	..	..	..	..	..	33
3	Scarlet Fever .....	..	4	3	..	1	..	..	..	..	..	..	..	..	8
4	Typhus Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5	Epidemic Influenza.....	2	1	..	..	..	..	2	..	..	1	1	..	1	8
6	Whooping Cough.....	10	9	..	..	..	..	..	..	..	..	..	..	..	19
7	Diphtheria.....	2	14	5	4	..	..	1	..	..	..	..	..	..	26
8	Enteric Fever .....	..	1	..	1	1	..	3	..	2	..	..	..	..	8
9	Asiatic Cholera .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
10	Diarrhoea, Dysentry	3	1	..	..	..	..	..	..	..	..	..	..	..	4
11	Epidemic Enteritis	3	2	1	..	..	..	..	..	..	..	..	..	..	6
12	Other Allied Diseases.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13	Hydrophobia.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
14	Glanders.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
15	Tetanus .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16	Anthrax .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
17	Cowpox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18	Syphilis	4	1	..	..	..	..	..	..	..	1	..	..	..	6
19	Gonorrhœa .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
20	Phagedæna .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
21	Erysipelas .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
22	Puerperal Fever .....	..	..	..	..	..	..	2	..	..	..	..	..	..	2
23	Pyæmia	1	1	1	..	..	..	..	1	1	..	..	..	..	5
24	Infective Endocarditis .....	..	..	..	..	..	..	..	..	1	..	..	..	..	1
25	Other Allied Diseases.....	1	..	..	..	..	..	..	..	..	..	..	..	..	1
26	Malarial Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
27	Rheumatic Fever.....	..	..	1	1	1	..	1	..	..	..	..	..	..	4
28	Rheumatism of Heart .....	..	..	..	1	..	..	1	..	..	..	..	..	..	2
29	Tuberculosis of Brain.....	10	6	1	1	..	1	..	2	..	..	..	..	..	21
30	Tuberculosis of Larynx .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
31	Phthisis	1	4	1	4	0	8	21	15	10	5	2	..	..	76
32	Abdominal Tuberculosis....	26	6	..	..	..	..	..	2	..	..	..	..	..	34
33	General Tuberculosis	3	2	1	..	..	..	1	..	1	..	..	..	..	8
34	Other forms Tuberculosis ..	7	1	4	1	..	..	1	2	1	1	..	1	..	19
35	Other Infective Diseases .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
36	Thrush .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
37	Actinomycosis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
38	Hydatid Diseases.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
39	Scurvy .....	..	1	..	..	..	..	..	..	..	..	..	..	..	1
40	Other Diseases due to Altered Food	..	..	..	..	..	..	..	..	..	..	..	..	..	..
41	Acute Alcoholism.....	..	..	..	..	..	..	1	1	..	..	..	..	..	2
42	Chronic Alcoholism.....	..	..	..	..	..	..	..	1	2	..	..	..	..	3
	CARRIED FORWARD ..	82	75	21	13	8	9	34	24	18	8	3	1	1	297	

TABLE V.—*Continued.*

No.	Diseases	AGES													All Ages
		0	1	5	10	15	20	25	35	45	55	65	75	85	
	BROUGHT FORWARD..	82	75	21	13	8	9	34	24	18	8	3	1	1	297
43	<i>Chronic Industrial Poisonings</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..
44	<i>Other Chronic Poisonings</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45	Osteo-arthritis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
46	Gout .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
47	Cancer .....	..	..	..	..	..	..	2	6	4	10	7	4	..	33
48	Diabetes Mellitus.....	..	..	..	1	1	..	..	1	..	1	1	..	..	5
49	Purpura Hæmorrhagica....	..	..	..	..	..	..	..	..	..	..	..	1	..	1
50	Hæmophilia .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
51	Anæmia .....	..	..	..	..	..	..	..	..	1	..	..	..	..	1
52	Lymphadenoma .....	..	..	..	..	..	..	..	..	..	1	1	..	..	2
53	Premature Birth	29	..	..	..	..	..	..	..	..	..	..	..	..	29
54	Injury at Birth.....	1	..	..	..	..	..	..	..	..	..	..	..	..	1
55	Debility at Birth	28	..	..	..	..	..	..	..	..	..	..	..	..	28
56	Atelectasis	7	..	..	..	..	..	..	..	..	..	..	..	..	7
57	<i>Congenital Defects</i>	8	..	..	..	..	..	..	..	..	..	..	..	..	8
58	Want of Breast Milk .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
59	Atrophy, Debility, Marasmus	29	6	..	..	..	..	..	..	..	..	..	..	..	35
60	Dentition	4	3	1	..	..	..	..	..	..	..	..	..	..	8
61	Rickets .....	..	2	..	..	..	..	..	..	..	..	..	..	..	2
62	Old Age, Senile Decay .....	..	..	..	..	..	..	..	..	..	..	13	18	5	36
63	Convulsions	18	3	..	..	..	..	..	..	..	..	..	..	..	21
64	Meningitis	1	1	..	1	..	..	..	2	..	1	..	..	..	6
65	Encephalitis .....	..	1	..	..	..	..	..	..	..	..	..	..	..	1
66	Apoplexy	1	..	..	..	..	..	..	..	1	6	11	1	1	21
67	Softening of Brain .....	..	..	..	..	..	..	..	1	1	1	1	..	..	4
68	Hemiplegia .....	..	..	..	..	..	..	..	..	..	..	1	2	..	3
69	General Paralysis of Insane	..	..	..	..	..	..	..	..	2	1	..	..	..	3
70	Other forms of Insanity....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
71	Chorea .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
72	Cerebral Tumour.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
73	Epilepsy .....	..	..	2	1	1	..	..	..	1	1	..	..	..	6
74	Laryngismus Stridulus .....	..	1	..	..	..	..	..	..	..	..	..	..	..	1
75	Locomotor Ataxy.....	..	..	..	..	..	..	..	1	..	..	..	..	..	1
76	Paraplegia .....	..	..	..	..	..	..	..	..	..	1	..	..	..	1
77	<i>Other forms, Brain Diseases..</i>	1	..	..	..	..	..	..	..	1	..	..	..	..	2
78	Otitis .....	..	2	..	..	..	..	..	..	..	..	..	..	..	2
79	Disease of Nose, Epistaxis..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
80	Diseases of Eye .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
81	Pericarditis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
82	Endocarditis .....	..	1	2	..	3	4	10	5	14	16	16	8	..	79
83	Hypertrophy of Heart .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
84	Angina Pectoris .....	..	..	..	..	..	..	..	..	..	1	..	..	..	1
85	Aneurism .....	..	..	..	..	..	..	..	1	..	..	..	..	..	1
86	Senile Gangrene .....	..	..	..	..	..	..	..	..	..	..	2	..	..	2
87	Embolism, Thrombosis .....	..	..	..	..	..	..	..	..	..	..	1	..	..	1
88	Phlebitis.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
89	Varicose Veins .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
90	<i>Other Diseases, Heart and Vessels</i>	..	..	..	..	..	..	..	1	1	2	2	..	..	6
	CARRIED FORWARD ..	209	95	26	16	13	13	46	42	44	50	59	35	7	655

TABLE V.—*Continued.*

No.	Diseases	AGES													All Ages
		0	1	5	10	15	20	25	35	45	55	65	75	85	
	BROUGHT FORWARD..	209	95	26	16	13	13	46	42	44	50	59	35	7	655
91	Laryngitis	1	..	1	..	..	..	..	..	..	1	..	..	..	3
92	Croup .....	..	2	..	..	..	..	..	..	..	..	..	..	..	2
93	Other Diseases, Larynx and Trachea )	..	..	..	..	..	..	..	..	..	..	..	..	..	..
94	Acute Bronchitis	32	22	2	..	1	..	..	..	..	1	2	3	1	64
95	Chronic Bronchitis .....	..	..	..	..	..	..	..	..	..	3	12	7	3	25
96	Lobar Pneumonia .....	..	..	..	1	..	1	1	4	5	1	1	..	..	14
97	Lobular Pneumonia.....	18	26	2	..	..	..	..	..	2	..	..	..	..	48
98	Pneumonia	3	3	..	1	1	1	4	2	2	3	2	..	..	22
99	Emphysema, Asthma .....	..	..	..	..	..	..	..	..	2	1	1	..	..	4
100	Pleurisy .....	..	..	..	..	..	..	1	..	1	..	1	..	..	3
101	Other Diseases, Respiratory System)	1	..	1	..	..	..	..	..	1	1	..	..	..	4
102	Diseases of Mouth and Annexa )	..	..	..	..	..	..	..	..	..	..	..	..	..	..
103	Diseases of Pharynx .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
104	Diseases of Esophagus....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
105	Ulcer of Stomach and Duodenum .....	..	..	..	..	2	1	..	..	..	..	..	..	..	3
106	Other Diseases of Stomach	1	..	..	..	..	..	..	..	..	..	..	..	..	1
107	Enteritis.....	9	3	..	..	..	..	..	..	1	..	..	..	..	13
108	Appendicitis	2	..	1	..	3	3	2	1	1	..	..	..	..	13
109	Obstruction of Intestine ..	..	..	..	..	..	..	1	..	2	..	..	..	..	3
110	Other Diseases of Intestine	..	..	..	..	..	..	..	..	..	..	..	..	..	..
111	Cirrhosis of Liver .....	..	..	..	..	..	..	..	..	..	2	..	..	..	2
112	Other Diseases of Liver....	..	..	..	..	..	..	..	1	..	2	..	3	..	6
113	Peritonitis .....	..	..	1	..	1	..	1	1	..	2	..	..	..	6
114	Other Diseases, Digestive System )	..	..	..	..	..	..	1	..	1	..	..	..	..	2
115	Diseases, Lymphatic System and Glands )	..	..	..	..	..	..	..	..	..	..	..	..	..	..
116	Acute Nephritis .....	..	5	1	1	..	..	..	..	1	1	1	..	..	10
117	Bright's Disease .....	..	2	2	..	..	..	2	..	4	3	3	1	..	17
118	Calculus .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
119	Diseases of Bladder and Prostate .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
120	Other Diseases, Urinary System)	1	..	..	..	..	..	1	..	..	2	..	..	..	4
121	Diseases of Testis and Penis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
122	Diseases of Ovaries.....	..	..	..	..	..	..	..	..	..	1	..	..	..	1
123	Diseases of Uterus and Appendages .....	..	..	..	..	..	..	..	1	2	..	..	..	..	3
124	Diseases of Vagina and External Genitals	..	..	..	..	..	..	..	..	..	..	..	..	..	..
125	Diseases of Breast .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
126	Abortion, Miscarriage.....	..	..	..	..	..	..	1	..	..	..	..	..	..	1
127	Puerperal Mania .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	CARRIED FORWARD..	277	158	37	19	21	19	61	52	69	74	82	49	11	929

TABLE V.—Continued.

No.	Diseases	AGES													All Ages
		0	1	5	10	15	20	25	35	45	55	65	75	85	
	BROUGHT FORWARD..	276	158	37	19	21	19	61	52	69	74	82	49	11	929
128	Puerperal Convulsions .....	..	..	..	..	1	..	1	..	..	..	..	..	..	2
129	Placenta Prævia, Flooding..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
130	Puerperal Thrombosis .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
131	<i>Other Diseases, Pregnancy and Childbirth .....</i>	..	..	..	..	..	1	3	1	..	..	..	..	..	5
132	Arthritis, Ostitis, Periostitis ..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
133	<i>Other Diseases, Osseous System</i> ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
134	Ulcer, Bedsore .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
135	Eczema .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
136	Pemphigus .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
137	<i>Other Diseases, Integumentary System ..</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	<i>Accidents and Negligence.</i>														
138	In Mines and Quarries .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
139	In Vehicular Traffic .....	..	..	..	..	..	..	1	..	..	..	..	..	..	1
140	On Railways.....	..	..	..	..	..	..	1	1	..	..	..	..	..	2
141	On Ships, Boats, &c. (not drowning) .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
142	In Building Operations .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
143	By Machinery .....	..	..	..	..	..	..	..	..	1	..	..	..	..	1
144	By Weapons and Implements ..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
145	Burns and Scalds.....	..	9	..	..	..	..	..	..	1	..	..	..	..	10
146	Poisons, Poisonous Vapours ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
147	Surgical Narcosis.....	..	..	..	..	..	..	..	1	..	..	..	..	..	1
148	Effects of Electric Shock ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
149	Corrosions by Chemicals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
150	Drowning .....	..	..	..	1	1	1	..	2	2	3	1	..	..	11
151	Suffocation, Overlaid in Bed ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
152	„ Otherwise	4	..	..	..	..	..	..	..	..	..	..	..	..	4
153	Falls not specified	1	..	..	..	..	..	2	1	..	2	1	..	..	7
154	Weather Agencies .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
155	Otherwise, not stated .....	..	1	1	..	..	..	..	..	1	..	..	..	..	3
156	Homicide	1	..	..	..	..	..	..	..	1	..	..	..	..	2
	<i>Suicides.</i>														
157	By Poison .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
158	By Asphyxia.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
159	By Hanging & Strangulation ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
160	By Drowning .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
161	By Shooting .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
162	By Cut or Stab.....	..	..	..	..	..	..	..	..	..	..	1	..	..	1
163	By Precipitation from Elevated Places.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
164	By Crushing.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
165	By other and unspecified methods .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
166	Execution .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
167	Sudden Death, cause not ascertained .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..
168	Ill defined and unspecified causes .....	..	..	..	..	..	..	..	..	1	1	..	..	..	2
	TOTALS.....	283	168	38	20	23	21	69	59	76	80	85	50	11	983



INFECTIOUS DISEASES IN WEST HARTLEPOOL,

1902.

POPULATION AT CENSUS 62,627.

" ESTIMATED NOW 65,000.



REFERENCES.

- SCARLET FEVER CASES
- TYPHOID
- DIPHTHERIA
- CROUP (MEMBRANOUS)
- SMALL-POX
- TYPHUS

NEW STREETS ARE SHOWN IN RED.

Borough of West Hartlepool
STREET MAP.

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J.W. BROWN, C.E., F.G.S., BOROUGH ENGINEER & SURVEYOR

SCALE 1:50,000

